



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>

Outcome Based Education

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.



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PROGRAM EDUCATIONAL OUTCOMES (PEOs), PROGRAM OUTCOMES (POs) & PROGRAM SPECIFIC OUTCOMES (PSO) of BCA, PHYSICS & ENVIRONMENTAL SCIENCE

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.



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Learning Outcome

SUBJECT- Bachelor of Computer Applications BCA [BATCH – 2017]

Program Outcomes (POs)

At the end of the Bachelor of Computer Applications Programme, the graduates will be able to:

PO	Title	Description
PO1	Domain Expertise	Apply knowledge of Science and experiments at an appropriate level to the discipline
PO2	Skills and Ethics	Analyze a problem and define the scientific requirements, appropriate to its solution.
PO3	Lifelong Learning	Understand new concepts and be articulate while executing knowledge with peers.
PO4	Modern Tool Usage	Use current techniques, skills, and tools necessary for scientific research.
PO5	Social Contribution	Follow current 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.

Program Specific Outcomes (PSOs)

At the end of the Bachelor of Computer Applications Programme, the graduates will be able to:

- PSO1 Acquire in depth **knowledge** of fundamental concepts, programming skills and synthesize application oriented skills leading to **design** for stand alone ,web and mobile based applications to fulfil global interest.
- PSO2 Evolve as globally competent computer professional possessing leadership skill and domain knowledge for developing or **creating** innovative solutions in multi-disciplinary domains.
- PSO3 Able to **apply** the knowledge gained during the course of the program in the areas of problem solving, analysis, design and development of software and hardware to choose a career option in high degree of employability/ entrepreneurship/Higher education. formulate and solve real life problems to meet the core competency with continuous up gradation.



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Course Outcomes (CO...BCASF1070)

At the end of the Chapter/Paper :... ..PROJECT(BCA-1070).....students will be able to:

CO F1070.1	Recognition: The students can DESCRIBE and IDENTIFY problems pertaining to technology.
COF1070.2	Interpreting: The ability of a student to ASSOCIATE and CONTRAST traditional methods with modern tools and technology.
CO F1070.3	Ideas: Students to obtain new findings through EXPERIMENT and DEMONSTRATION.
CO F1070.4	Positive impact: The students can COMPARE the positive impact of technology in the society
CO F1070.5	Innovators: The students can CREATE and FORMULATE plans and solutions that will help solve modern days' problems.

Course Outcomes (CO...BCASF1020)

AT THE END OF THE CHAPTER/PAPER DATA WAREHOUSING AND DATA MINING 1020 STUDENTS WILL BE ABLE TO:

COF1020.1	Analysis: The students can ANALYZE data and INFER new knowledge using logical and mathematical skills.
COF1020.2	Effective Maintenance: The students will be able to efficiently MAINTAIN large storehouses of data required by client applications, while ensuring data consistency and reliability.
COF1020.3	Planning: The students can ENVISION and CARY THROUGH big-data oriented projects, through requirements gathering, collection and cleaning of data, pattern analysis and deployment of meaningful patterns useful to decision-oriented applications like businesses, healthcare, cyber security and so on.
COF1020.4	SELECT, COMPARE and carefully differentiate between situations in order to APPLY different data mining techniques like classification, prediction, clustering, frequent pattern mining, association and outlier analysis.
CO F1020.5	Evaluation: ASSESS and RANK the performance of different data-mining algorithms and Enable the students to PLAN and PREPARE for further research and innovation in the field of data mining.

Correlation:

Marks (%)	Grade	Correlation	Levels
31 - 60	1	Slight Correlation	L - Low
61 - 80	2	Moderate Correlation	M – Medium
81 - 100	3	Significant Correlation	H – High

Learning Outcome of Department of BCA, St. Edmund's College, Shillong



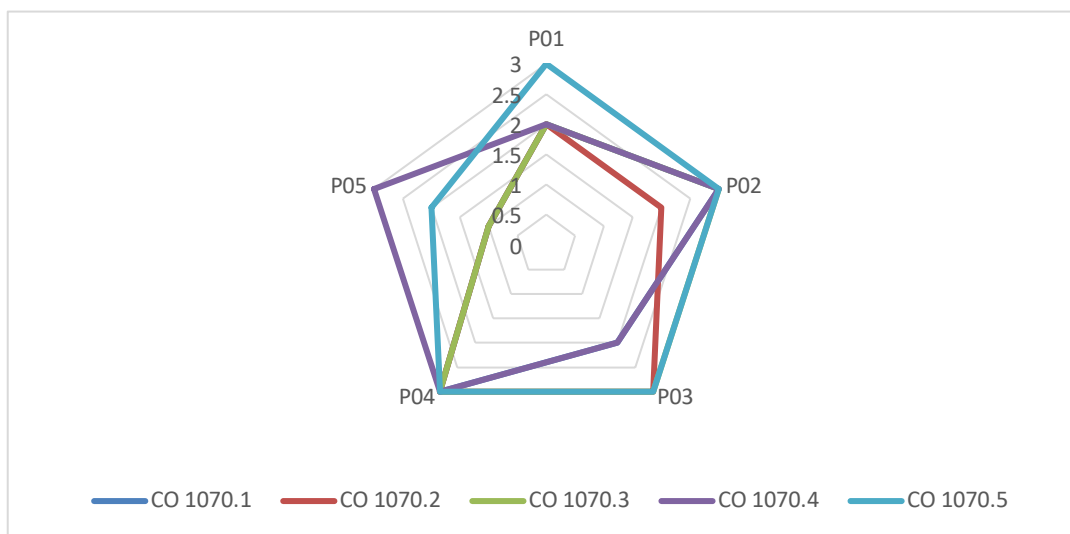
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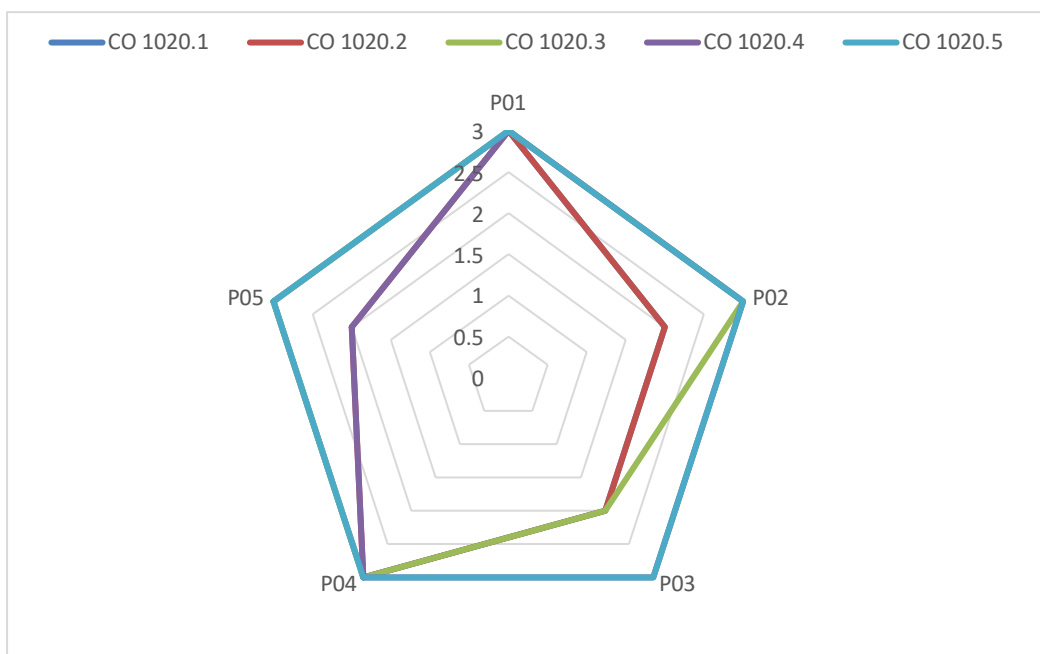
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CO – PO MAPPING OF 2017...PROJECT (BCA 1070)



CO – PO MAPPING OF ...(BCA 1020)





St. Edmund's College

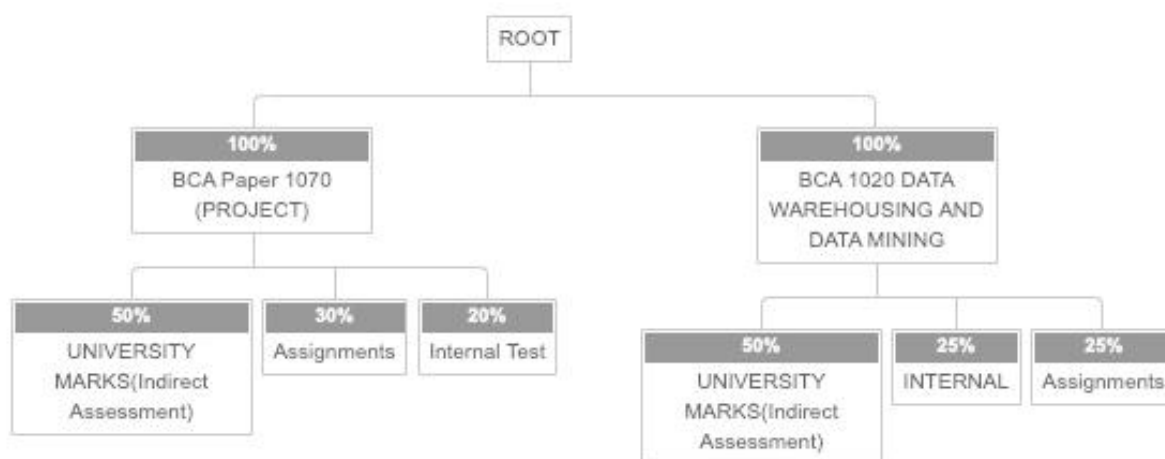
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STATISTICAL PARAMETERS FOR PO, PSOs & CO

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



Papers executed for Learning Outcome	
BIOT F1070-PAPER - 603	Project work for BCA
BIOT F1020-PAPER - 602(b)	Ware Housing and Data Mining
BIOT F1070-PAPER - 603	Internal assignments, university Marks, sessional exam
BIOT F1020-PAPER - 602(b)	Internal assignments, university Marks, sessional exam

Learning Outcome of Department of BCA, St. Edmund's College, Shillong



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Consolidated CO – PO-PSO MAPPING OF ... (BCA 1020) [Linways Software Computed]

CO-PO Mapping Report

CO	PO3
COF1020.1	2.00
COF1020.2	2.00
COF1020.3	3.00
COF1020.4	3.00
CO F1020.5	2.00

CO-PSO Mapping Report

CO	PO1	PO2	PO4	PO5
COF1020.1	3.00	3.00	2.00	1.00
COF1020.2	3.00	3.00	3.00	1.00
COF1020.3	2.00	2.00	3.00	3.00
COF1020.4	3.00	2.00	1.00	2.00
CO F1020.5	2.00	3.00	3.00	1.00

Course-PO Mapping Report

Course	Lifelong Learning
BCAS F1020	3.00

Course-PSO Mapping Report

Course	Domain Expertise	Skills and Ethics	Modern Tool Usage	Social Contribution
BCAS F1020	3.00	3.00	3.00	3.00

CO Attainment(ROOT)

Subject/CO	COF1020.1	COF1020.2	COF1020.3	COF1020.4	CO F1020.5
BCAS F1020	2	2	2	2	2

Learning Outcome of Department of BCA, St. Edmund's College, Shillong



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CO ATTAINMENT

SELECT TREE BCA SIXTH SEMESTER 2017 BATCH

CO Attainment

Recalculate Attainment

Max Descriptor : 3.00

Print

CO Code	COF1020.1	COF1020.2	COF1020.3	COF1020.4	CO F1020.5
Attainment	2.00000	2.00000	2.00000	2.00000	2.00000
Description	Medium	Medium	Medium	Medium	Medium

* Co Attainment Rule : N Student N Percentage

Attainment is calculated as the weighted average of each individual PO attainment.

Attainment = (PO1 * weightage) + (PO2 * weightage) + ...

PO ATTAINMENT

SELECT TREE BCA SIXTH SEMESTER 2017 BATCH

PO Attainment

Recalculate Attainment

Max Descriptor : 3.00

Print

PO Code	PO1	PO2	PO3	PO4	PO5
COF1020.1	2.00000	2.00000	2.00000	2.00000	2.00000
COF1020.2	2.00000	2.00000	2.00000	2.00000	2.00000
COF1020.3	2.00000	2.00000	2.00000	2.00000	2.00000
COF1020.4	2.00000	2.00000	2.00000	2.00000	2.00000
CO F1020.5	2.00000	2.00000	2.00000	2.00000	2.00000
PO Attainment (ROOT) Course:BCAS F1020	2.00000	2.00000	2.00000	2.00000	2.00000

Rule Type : N Student N Percentage

Attainment is calculated as the weighted average of each individual PO attainment.

Attainment = (PO1 * weightage) + (PO2 * weightage) + ...

Learning Outcome of Department of BCA, St. Edmund's College, Shillong



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Consolidated CO – PO-PSO MAPPING OF ... (BCA 1070) {Linways Software Computed}

CO-PO Mapping Report

CO	PO3
CO F1070.1	2.00
COF1070.2	3.00
CO F1070.3	3.00
CO F1070.4	2.00
CO F1070.5	3.00

CO-PSO Mapping Report

CO	PO1	PO2	PO4	PO5
CO F1070.1	2.00	3.00	3.00	1.00
COF1070.2	2.00	2.00	3.00	1.00
CO F1070.3	2.00	2.00	3.00	3.00
CO F1070.4	2.00	3.00	3.00	3.00
CO F1070.5	3.00	3.00	3.00	2.00

Course-PO Mapping Report

Course	Lifelong Learning
BCAS F1070	3.00

Course-PSO Mapping Report

Course	Domain Expertise	Skills and Ethics	Modern Tool Usage	Social Contribution
BCAS F1070	3.00	3.00	3.00	3.00

CO Attainment(ROOT)

Subject/CO	CO F1070.1	COF1070.2	CO F1070.3	CO F1070.4	CO F1070.5
BCAS F1070	2.59	2.59	2.59	2.59	2.59

Learning Outcome of Department of BCA, St. Edmund's College, Shillong



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CO ATTAINMENT

SELECT TREE BCA SIXTH SEMESTER 2017 BATCH

CO Attainment

Recalculate Attainment

Max Descriptor : 3.00

Print

CO Code	CO F1070.1	COF1070.2	CO F1070.3	CO F1070.4	CO F1070.5
Attainment	2.58627	2.58627	2.58627	2.58627	2.58627

* Co Attainment Rule : Simple Average

PO ATTAINMENT

SELECT TREE BCA SIXTH SEMESTER 2017 BATCH

PO Attainment

Recalculate Attainment

Max Descriptor : 3.00

Print

PO Code	PO1	PO2	PO3	PO4	PO5
CO F1070.1	2.58627	2.58627	2.58627	2.58627	2.58627
COF1070.2	2.58627	2.58627	2.58627	2.58627	2.58627
CO F1070.3	2.58627	2.58627	2.58627	2.58627	2.58627
CO F1070.4	2.58627	2.58627	2.58627	2.58627	2.58627
CO F1070.5	2.58627	2.58627	2.58627	2.58627	2.58627
PO Attainment (ROOT) Course:BCAS F1070	1.00000	1.00000	1.00000	1.00000	1.00000

Rule Type : Simple Average

Learning Outcome of Department of BCA, St. Edmund's College, Shillong



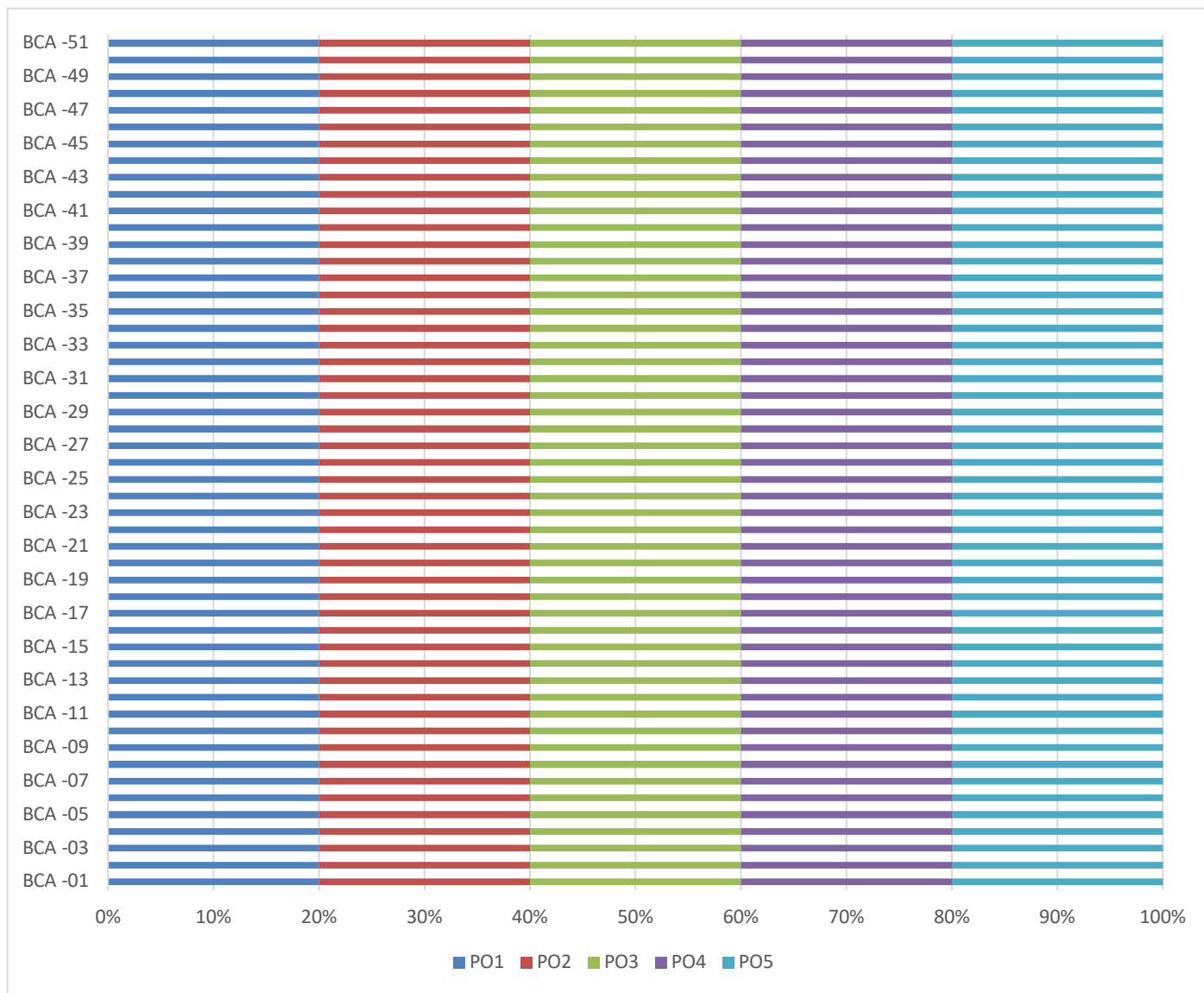
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PO MAPPING OF (BCA 1070)- Computed using Linways OBE Software & Excel spreadsheet



Learning Outcome of Department of BCA, St. Edmund's College, Shillong



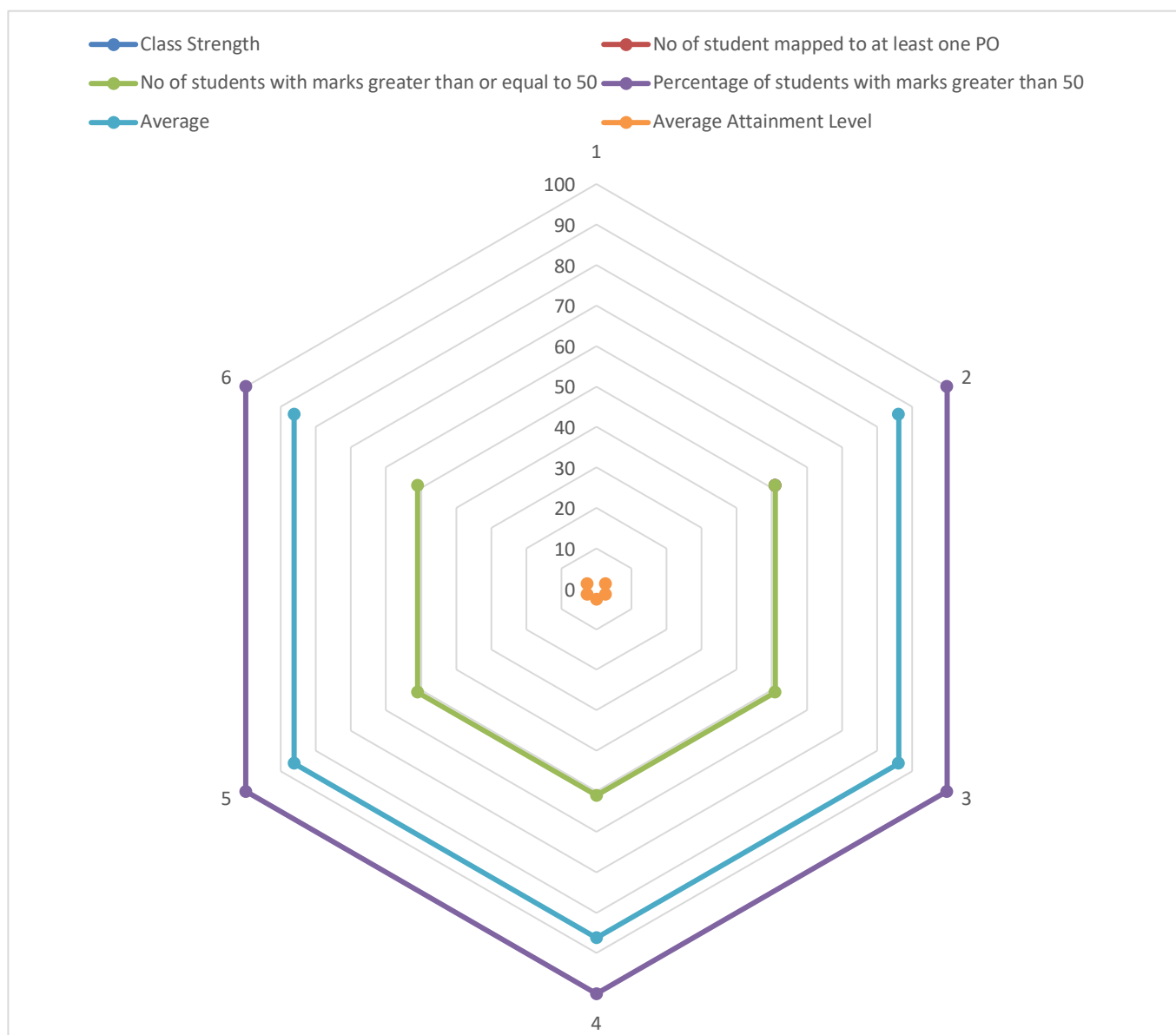
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Average Attainment Level for PO MAPPING OF (BCA 1070) - Computed using Linways OBE Software & Excel spreadsheet



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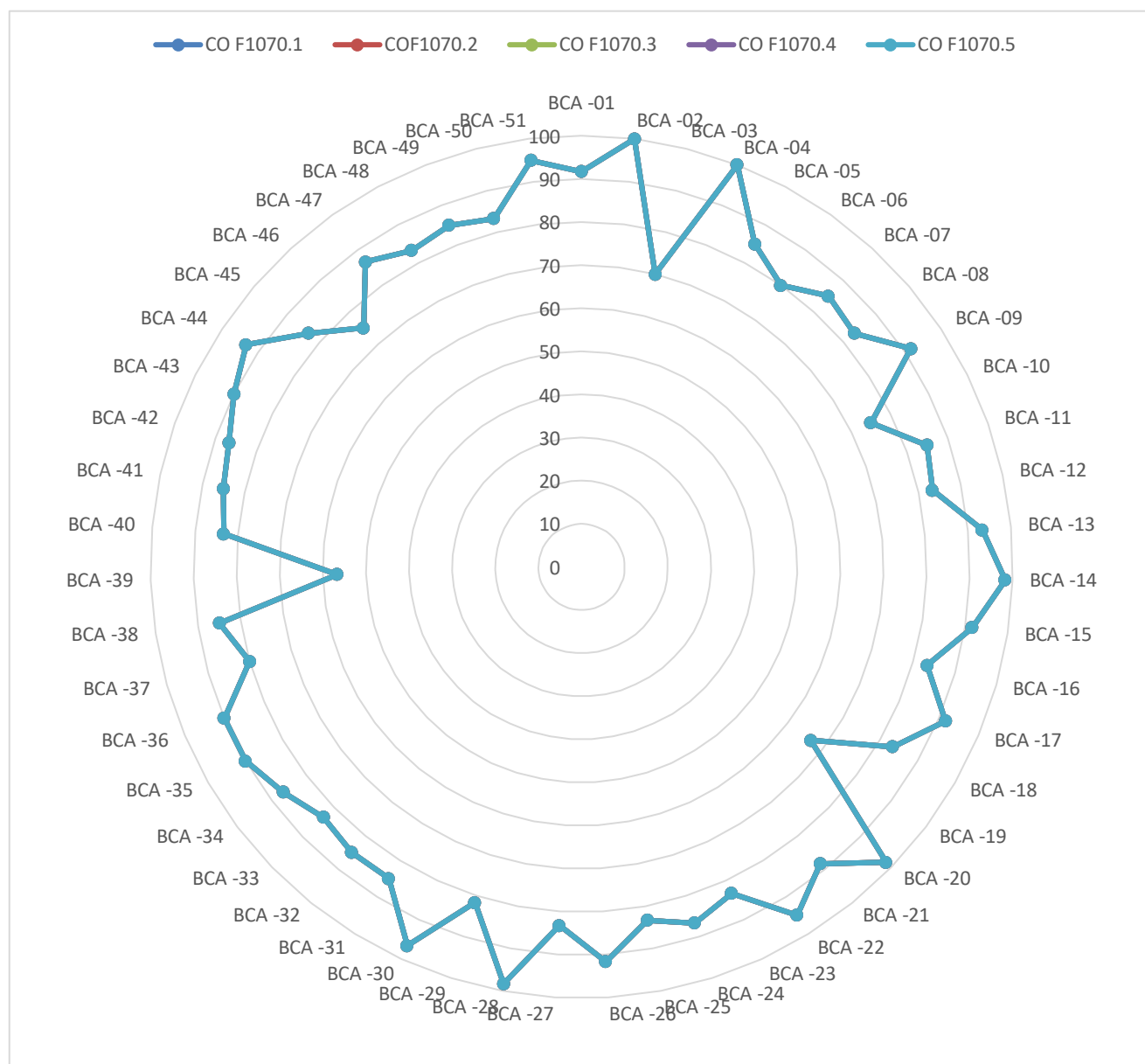
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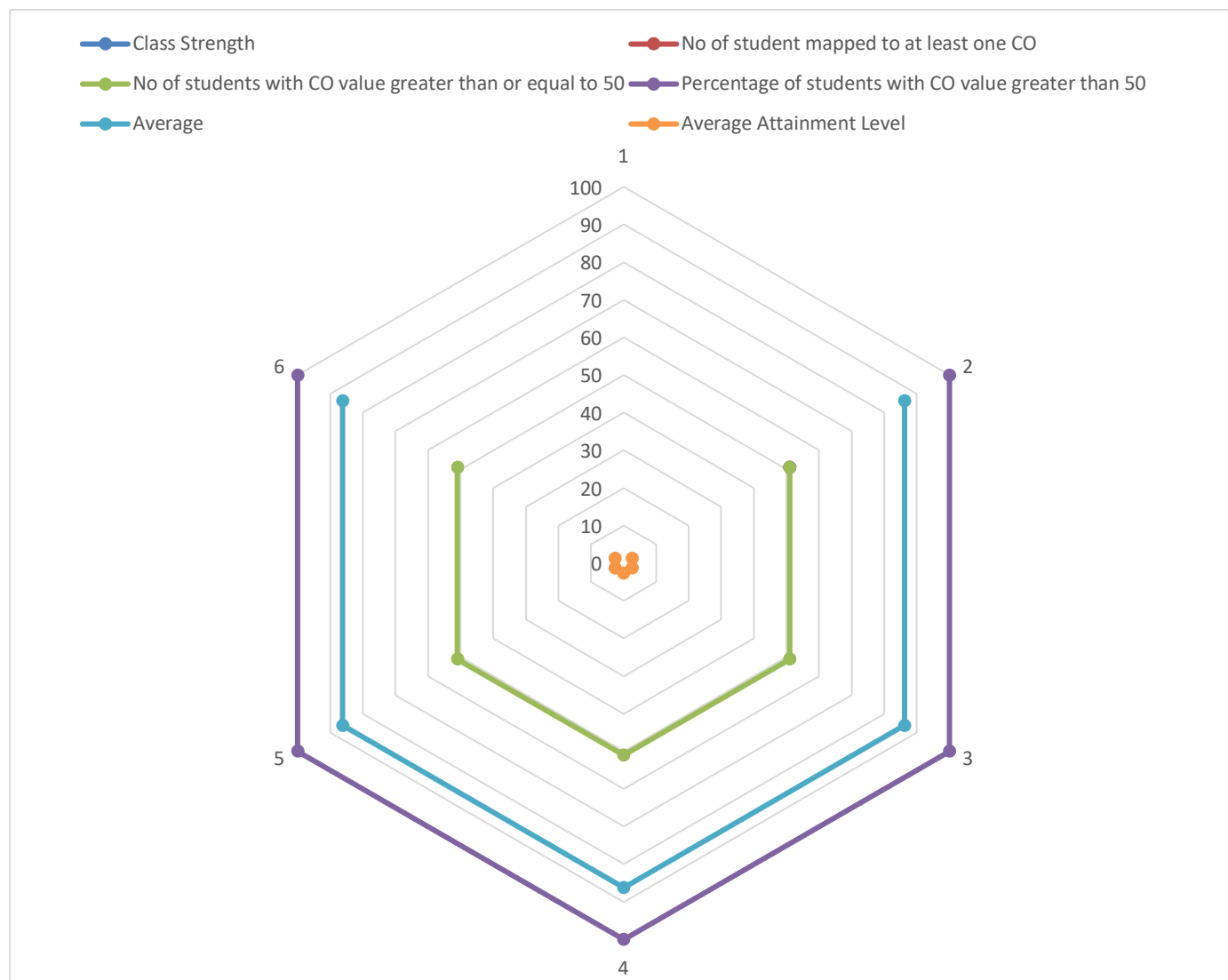
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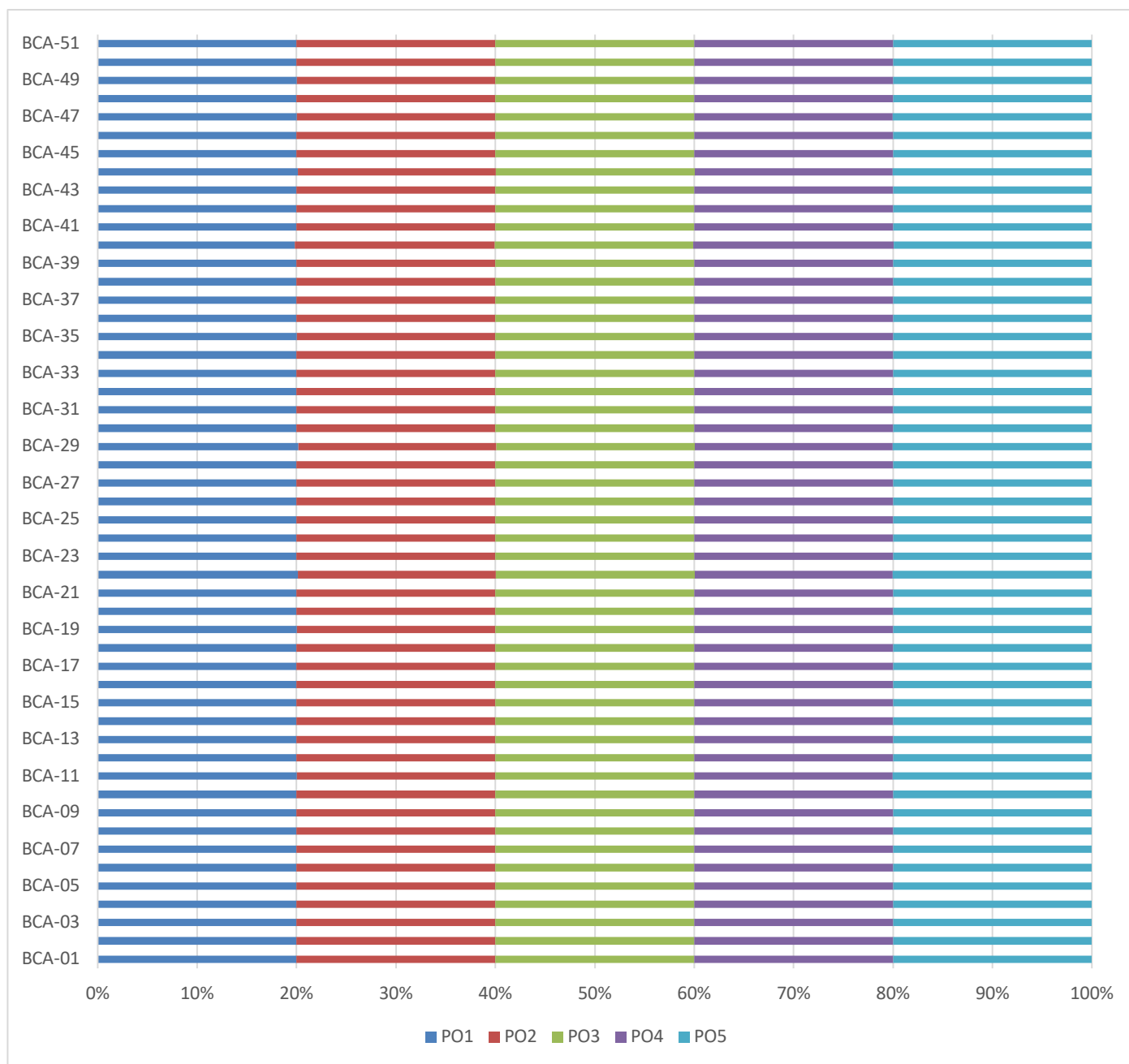
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PO MAPPING OF (BCA 1020) -Computed using Linways OBE Software & Excel spreadsheet



Learning Outcome of Department of BCA, St. Edmund's College, Shillong



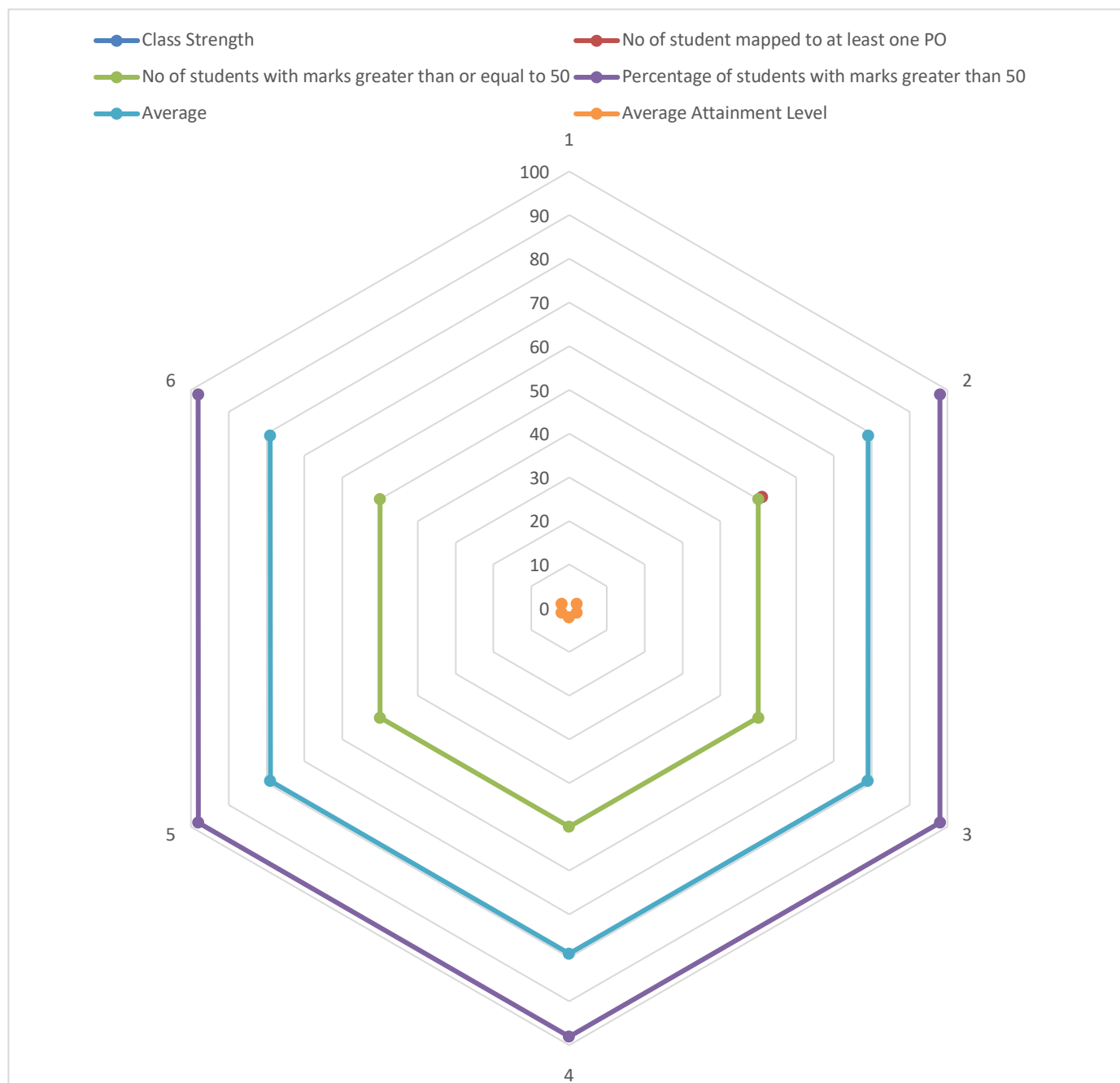
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Average Attainment Level for PO Mapping of (BCA 1020) -Computed using Linways OBE Software & Excel spreadsheet



Learning Outcome of Department of BCA, St. Edmund's College, Shillong



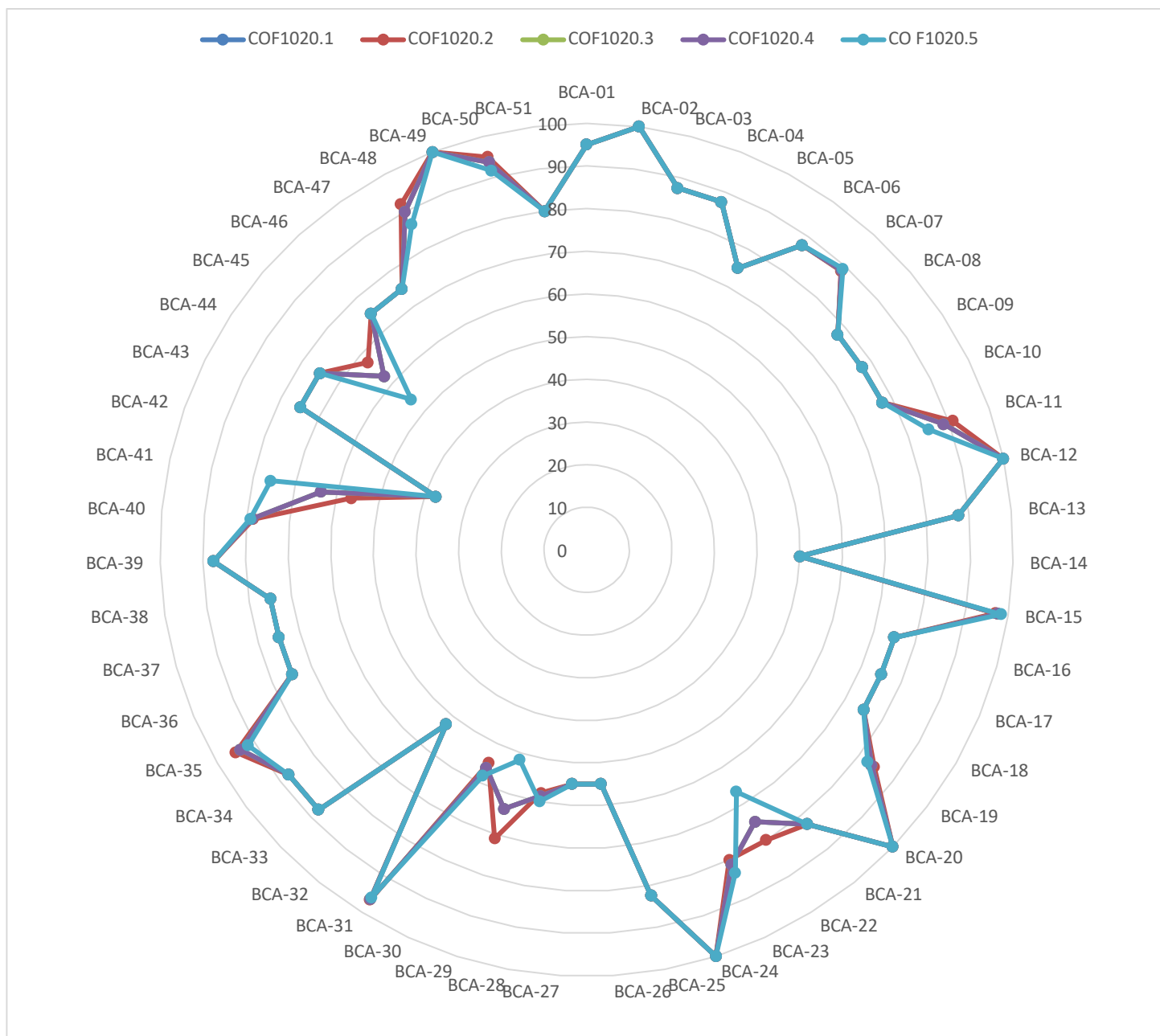
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CO MAPPING OF (BCA 1020) -Computed using Linways OBE Software & Excel spreadsheet



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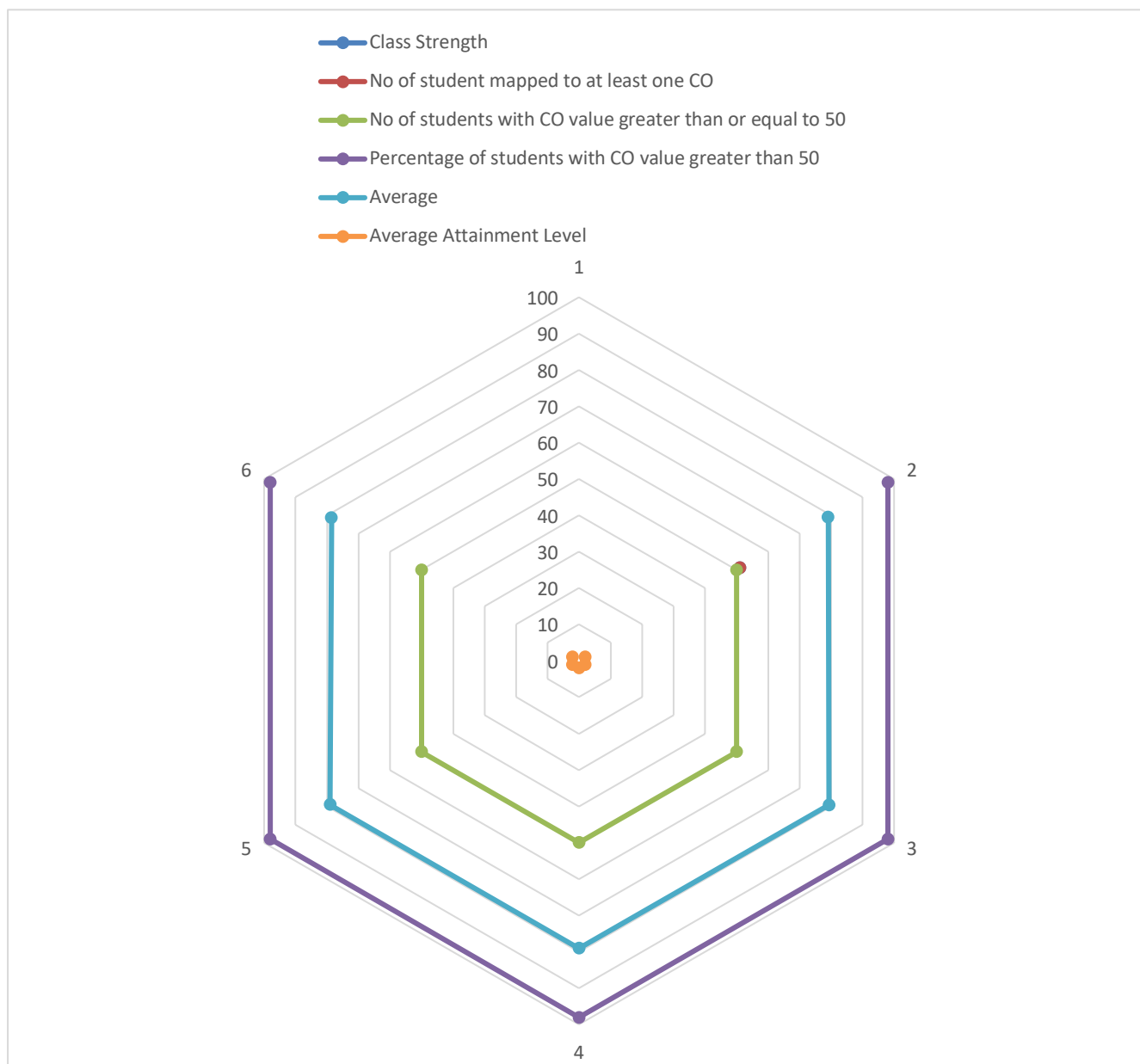
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Average Attainment level of CO MAPPING OF (BCA 1020) -Computed using Linways OBE Software & Excel spreadsheet





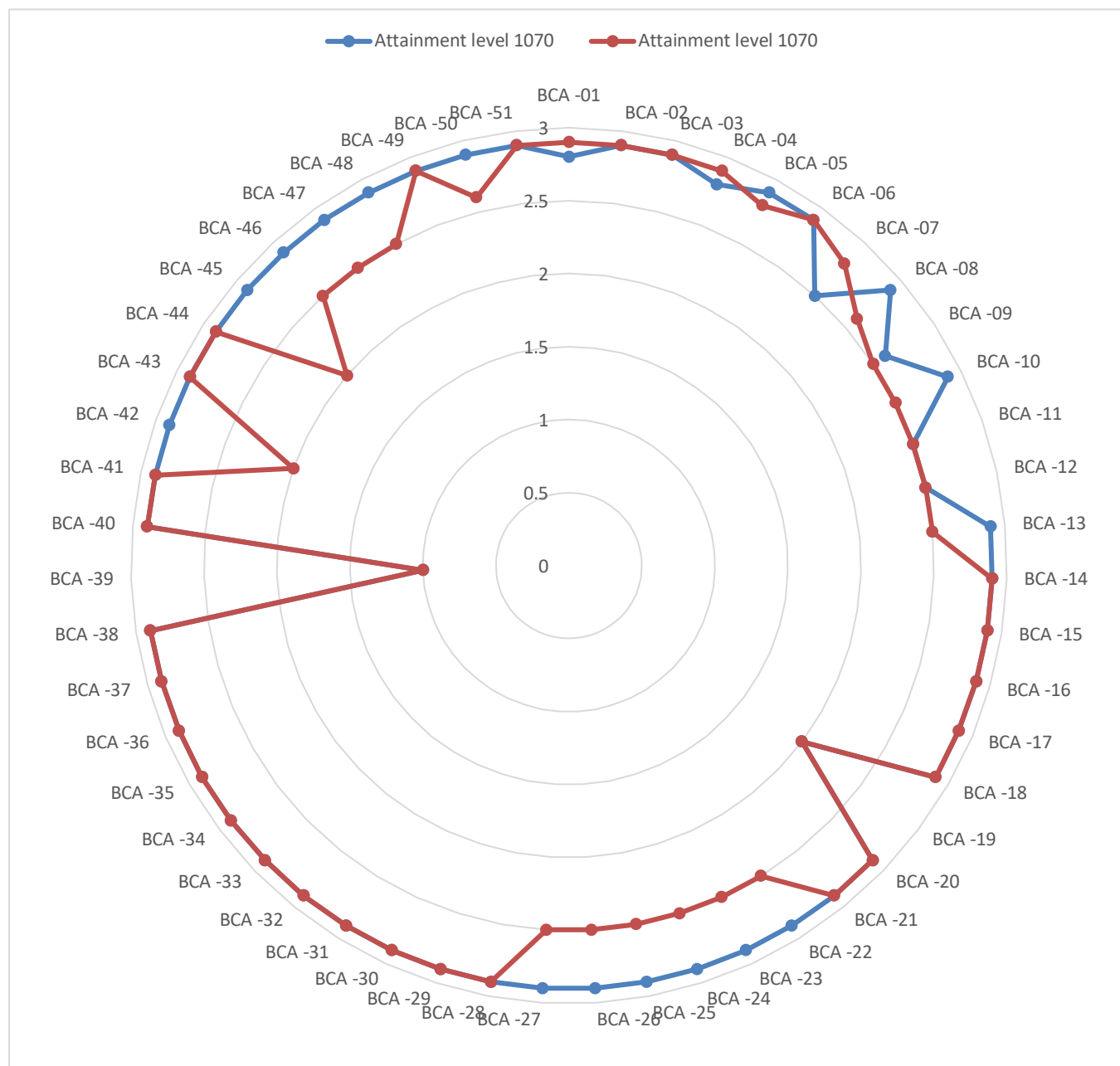
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Individual Attainment Level of individual student of (BCA 1020 & BCA 1070) -Computed using Linways OBE Software & Excel spreadsheet



Learning Outcome of Department of BCA, St. Edmund's College, Shillong



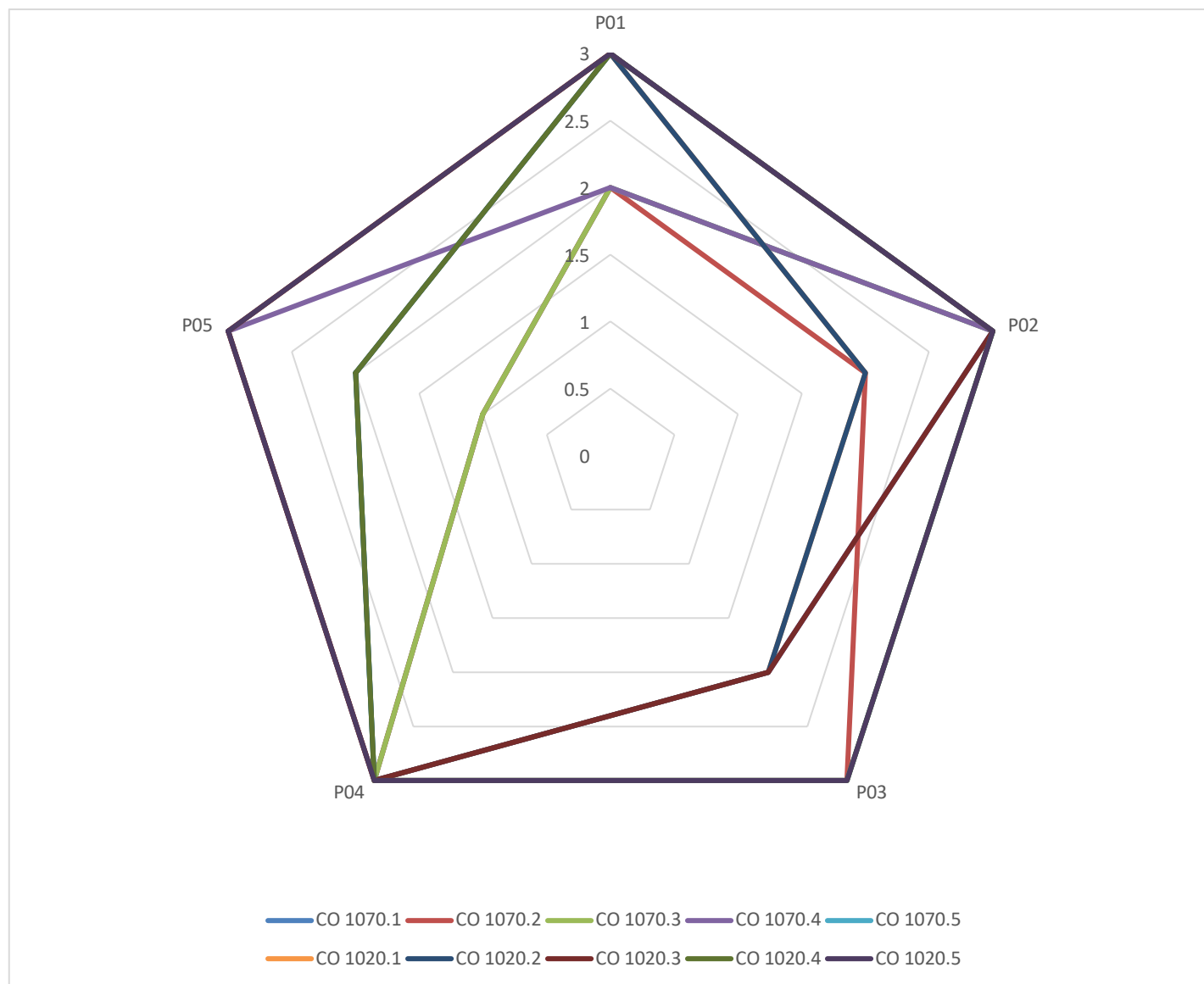
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CO - PO MAPPING OF (BCA 1020 & BCA 1070) -Computed using Linways OBE Software & Excel spreadsheet



Learning Outcome of Department of BCA, St. Edmund's College, Shillong



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Learning Outcome

PHYSICS HONOURS[BATCH : 2017]

Program Outcomes (POs)

At the end of the BSc Physics (Hons) Programme, the graduates will be able to:

PO	Title	Description
PO1	Domain Expertise	Apply knowledge of Science and experiments at an appropriate level to the discipline
PO2	Skills and Ethics	Analyze a problem and define the scientific requirements, appropriate to its solution.
PO3	Lifelong Learning	Understand new concepts and be articulate while executing knowledge with peers.
PO4	Modern Tool Usage	Use current techniques, skills, and tools necessary for scientific research.
PO5	Social Contribution	Follow current 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.

Program Specific Outcomes (PSOs)

At the end of the BSc. Physics (Hons) Programme, the graduates will be able to:

- PSO1** A Physics honours graduate will be able to analyze and synthesize complex data in any field, using the experimental skills acquired by him/her.
- PSO2** A Physics honours graduate will be able to do precise measurement and evaluations in industry, besides being able to analyze and synthesize complex data of any field using the computer and mathematical skills acquired by him/her.
- PSO3** A Physics honours graduate will be able to investigate new fields of research and development using the theoretical knowledge acquired by him/her.

Learning Outcome of Department of Physics, St. Edmund's College,
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Course Outcomes (CO F1040)

At the end of the Chapter/Paper : PAPER VII (Condensed Matter Physics) students will be able to:

CO F1040.1	The students can design a method for attaining low temperatures by applying/using Joule Thomson effect.
CO F1040.2	The students will be able to formulate an expression for the most probable velocity using Maxwell-Boltzmann distribution in a molecular system and evaluate it at any given temperature.
CO F1040.3	The students can design and construct a 3D model for any given crystal structure (sc, fcc, bcc) and hence evaluate the packing fraction for it.
CO F1040.4	The students will be able to evaluate the value of electrical conductivity (σ) for a given metal, when the thermal conductivity is supplied to them, using Weidemann-Franz law.
CO F1040.5	The students will be able to explain the formation of bands & band gap besides evaluating a number of parameters (such as intrinsic mobility, impurity, conductivity etc.,) for an extrinsic semiconductor.

Course Outcomes (CO F1050)

At the end of the Chapter/paper PAPER VIII Atomic & Molecular Spectroscopy, Nuclear Physics students will be able to:

CO F1050.1	The students can compare and contrast between Normal and Anomalous Zeeman effect and apply it in designing a method to study the characteristics of the system as well as to determine the unknown wavelength of a source.
CO F1050.2	The students will be able to apply the knowledge of spectral analysis in fields, such as synthesis of satellite imagery etc.,
CO F1050.3	The students can use the acquired ideas of UV, IR, AE & AA spectroscopy in investigating varied sample characteristics.
CO F1050.4	The students will be able to use the knowledge in artificial radioactivity in the design and construction of Nuclear reactor.
CO F1050.5	The students can use the concepts of elementary particles to investigate experimental high energy physics data.

CO-RELATION

Marks (%)	Grade	Correlation	Levels
31 - 60	1	Slight Correlation	L - Low
61 - 80	2	Moderate Correlation	M – Medium
81 - 100	3	Significant Correlation	H – High

Learning Outcome of Department of Physics, St. Edmund's College,
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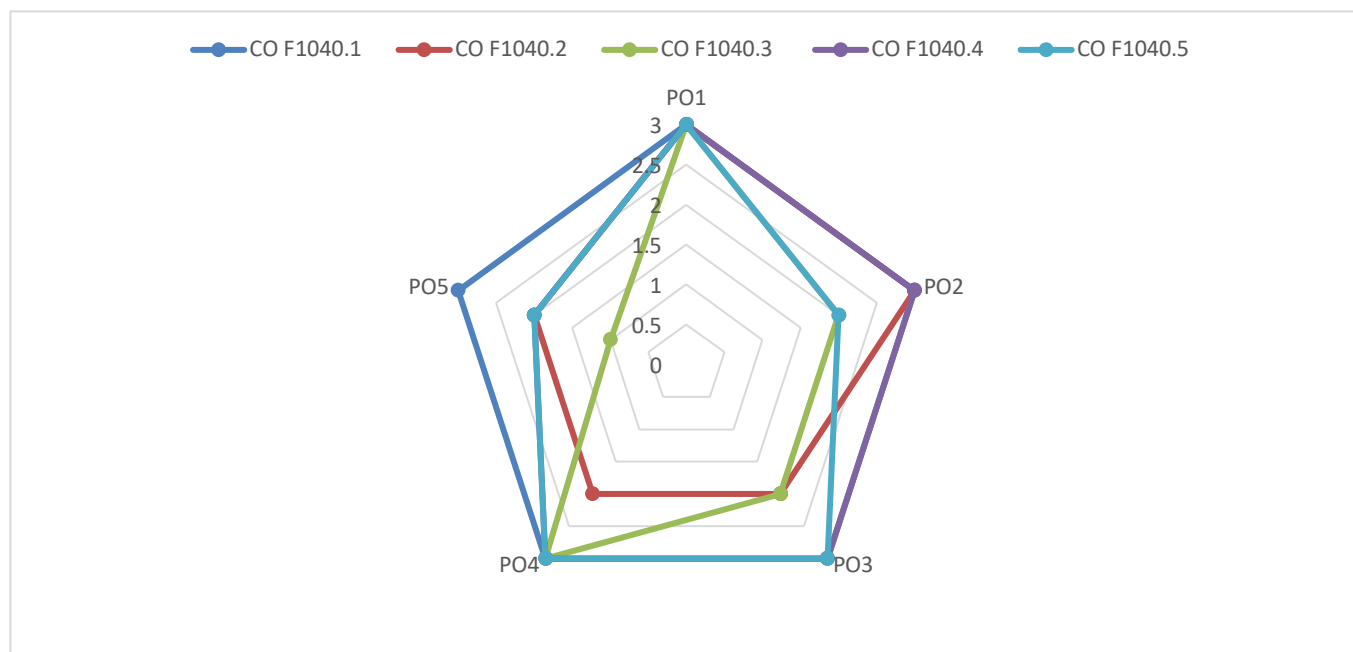
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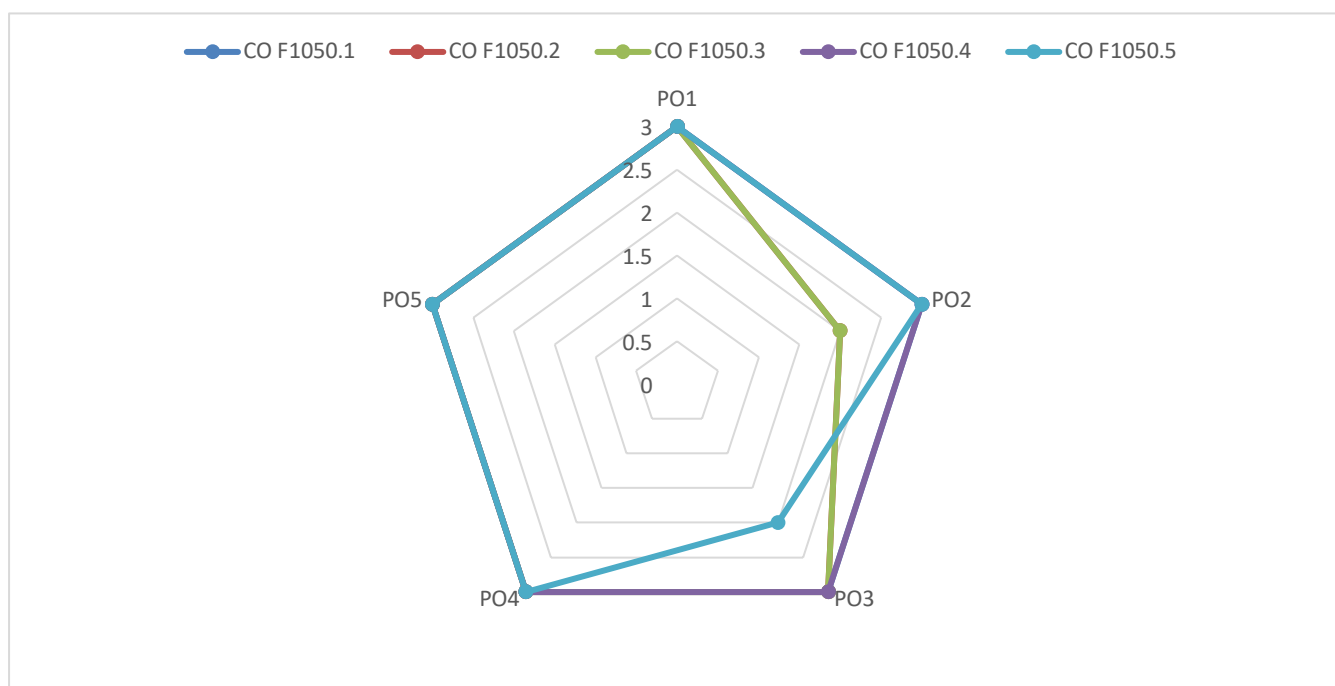
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CO – PO MAPPING OF (PAPER VII) 2017 Batch



CO – PO MAPPING OF (PAPER VIII) 2017 Batch



Learning Outcome of Department of Physics, St. Edmund's College,
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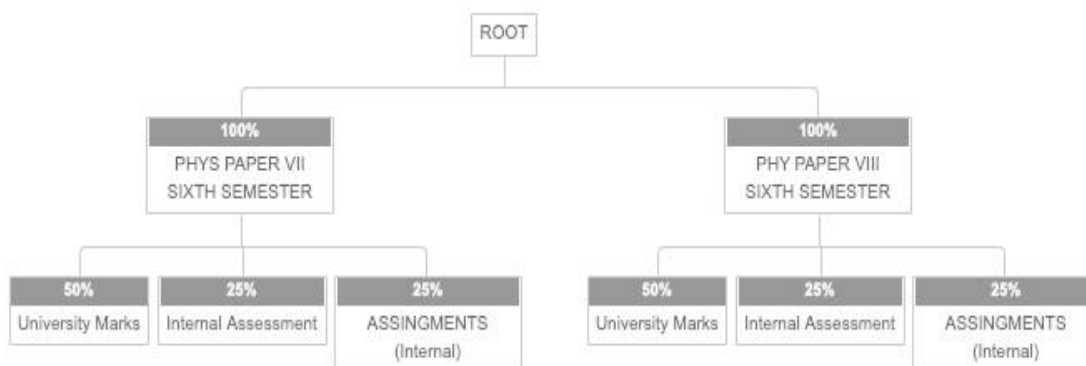
STATISTICAL PARAMETERS FOR PO, PSOs & CO

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

PHYSICS SIXTH SEMESTER 2019 (LEARNING OUTCOMES)

Change Tree

Note: Click on the leaf nodes and assign assessments to it.



Papers executed for Learning Outcome Computation

BIOT F1240-PAPER VII (T).1240	Condensed Matter Physics
BIOT F1020-PAPER VII (P).1250	Atomic & Molecular Spectroscopy, Nuclear Physics
BIOT F1240-PAPER VII (T).1240	Internal assignments, university Marks, sessional exam
BIOT F1020-PAPER VII (P).1250	Internal assignments, university Marks, sessional exam

Learning Outcome of Department of Physics, St. Edmund's College,
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Consolidated CO – PO-PSO MAPPING OF (PAPER VII, 1040) – 2017 Batch as computed by Linways OBE software

PO List				
Sl. No.	PO Code	PO Name	PO Description	Order No.
1	PO2	Skills and Ethics	Analyze a problem and define the scientific requirements, appropriate to its solution.	2
2	PO3	Lifelong Learning	Understand new concepts and be articulate while executing knowledge with peers.	3
3	PO5	Social Contribution	Follow current thinking for implementing the technology for the larger benefit of the society.	5

PSO List				
Sl. No.	PO Code	PO Name	PO Description	Order No.
1	PO1	Domain Expertise	Apply knowledge of Science and experiments at an appropriate level to the discipline	1
2	PO4	Modern Tool Usage	Use current techniques, skills, and tools necessary for scientific research.	4

CO-PO Mapping Report				
CO	PO2	PO3	PO5	
CO F1040.1	3.00	3.00	3.00	
CO F1040.2	3.00	2.00	2.00	
CO F1040.3	2.00	2.00	1.00	
CO F1040.4	3.00	3.00	2.00	
CO F1040.5	2.00	3.00	2.00	

CO-PSO Mapping Report			
CO	PO1	PO4	
CO F1040.1	3.00	3.00	
CO F1040.2	3.00	2.00	
CO F1040.3	3.00	3.00	
CO F1040.4	3.00	3.00	
CO F1040.5	3.00	3.00	

Course-PO Mapping Report			
Course	Skills and Ethics	Lifelong Learning	Social Contribution
PHYS F1040	3.00	3.00	3.00

Course-PSO Mapping Report		
Course	Domain Expertise	Modern Tool Usage
PHYS F1040	3.00	3.00

SELECT TREE PHYSICS SIXTH SEMESTER 2019 (Learning Outcomes)

CO Attainment

Recalculate Attainment					
Max Descriptor : 3.00					
CO Code	CO F1040.1	CO F1040.2	CO F1040.3	CO F1040.4	CO F1040.5
Attainment	2.00000	2.00000	2.00000	2.00000	2.00000
Description	Medium	Medium	Medium	Medium	Medium

* Co Attainment Rule : N Student N Percentage
Attainment is calculated as the weighted average of each individual PO attainment.
Attainment = (PO1 * weightage) + (PO2 * weightage) + ...

Learning Outcome of Department of Physics, St. Edmund's College,
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Consolidated CO – PO – PSO MAPPING OF (PAPER VIII, 1050) 2017 Batch computed by Linways OBE Software's

CO-PO Mapping Report

CO	PO2	PO3	PO5
CO F1050.1	3.00	2.00	3.00
CO F1050.2	2.00	1.00	3.00
CO F1050.3	2.00	1.00	3.00
CO F1050.4	3.00	3.00	3.00
CO F1050.5	3.00	3.00	3.00

CO-PSO Mapping Report

CO	PO1	PO4
CO F1050.1	3.00	3.00
CO F1050.2	3.00	3.00
CO F1050.3	3.00	3.00
CO F1050.4	3.00	3.00
CO F1050.5	3.00	2.00

Course-PO Mapping Report

Course	Skills and Ethics	Lifelong Learning	Social Contribution
PHYS F1050	3.00	3.00	3.00

Course-PSO Mapping Report

Course	Domain Expertise	Modern Tool Usage
PHYS F1050	3.00	3.00

CO Attainment(ROOT)

Subject/CO	CO F1050.1	CO F1050.2	CO F1050.3	CO F1050.4	CO F1050.5
PHYS F1050	2	2	2	2	2

PO Attainment Report

SELECT TREE PHYSICS SIXTH SEMESTER 2019 (Learning Outcomes)

CO Attainment

Recalculate Attainment

Max Descriptor : 3.00

Print

CO Code	CO F1050.1	CO F1050.2	CO F1050.3	CO F1050.4	CO F1050.5
Attainment	2.00000	2.00000	2.00000	2.00000	2.00000
Description	Medium	Medium	Medium	Medium	Medium

* Co Attainment Rule : N Student N Percentage

Attainment is calculated as the weighted average of each individual PO attainment.

Attainment = (PO1 * weightage) + (PO2 * weightage) + ...

Learning Outcome of Department of Physics, St. Edmund's College,
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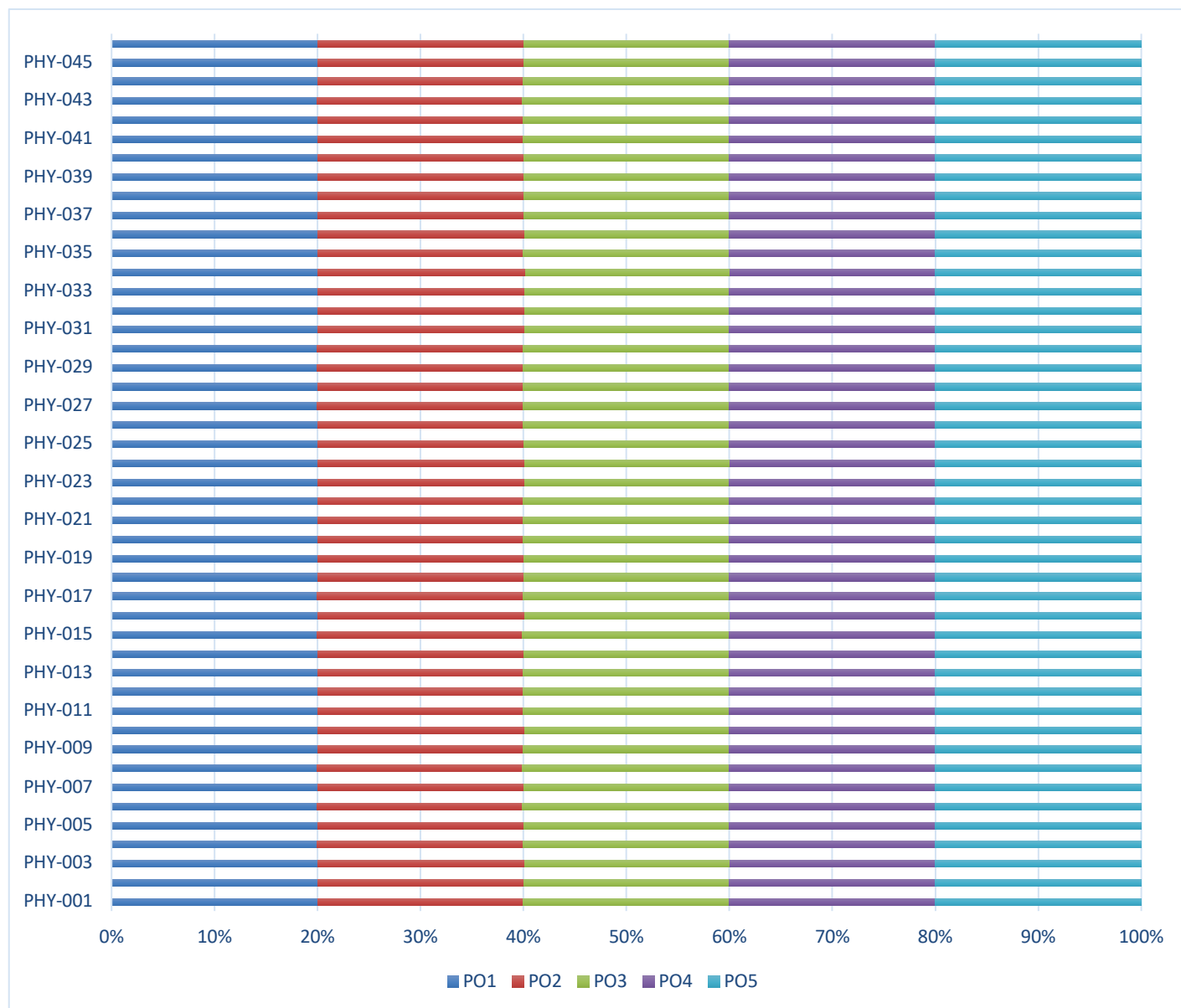
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PO MAPPING OF (Physics 1040)- Computed using Linways OBE Software & Excel spreadsheet



Learning Outcome of Department of Physics, St. Edmund's College,
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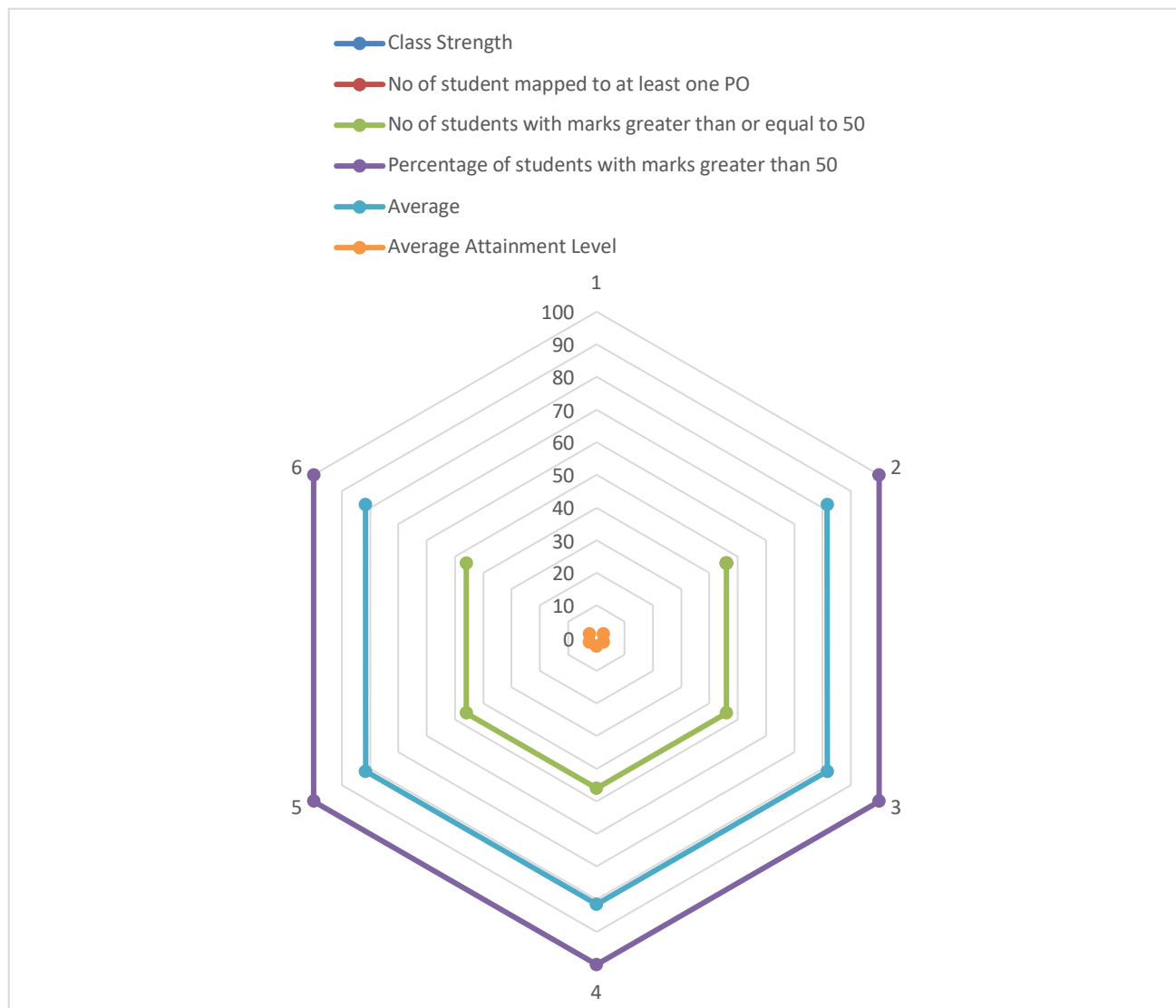
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Consolidated Average PO Attainment Level (Physics 1040)- Computed using Linways OBE Software & Excel spreadsheet



Learning Outcome of Department of Physics, St. Edmund's College,
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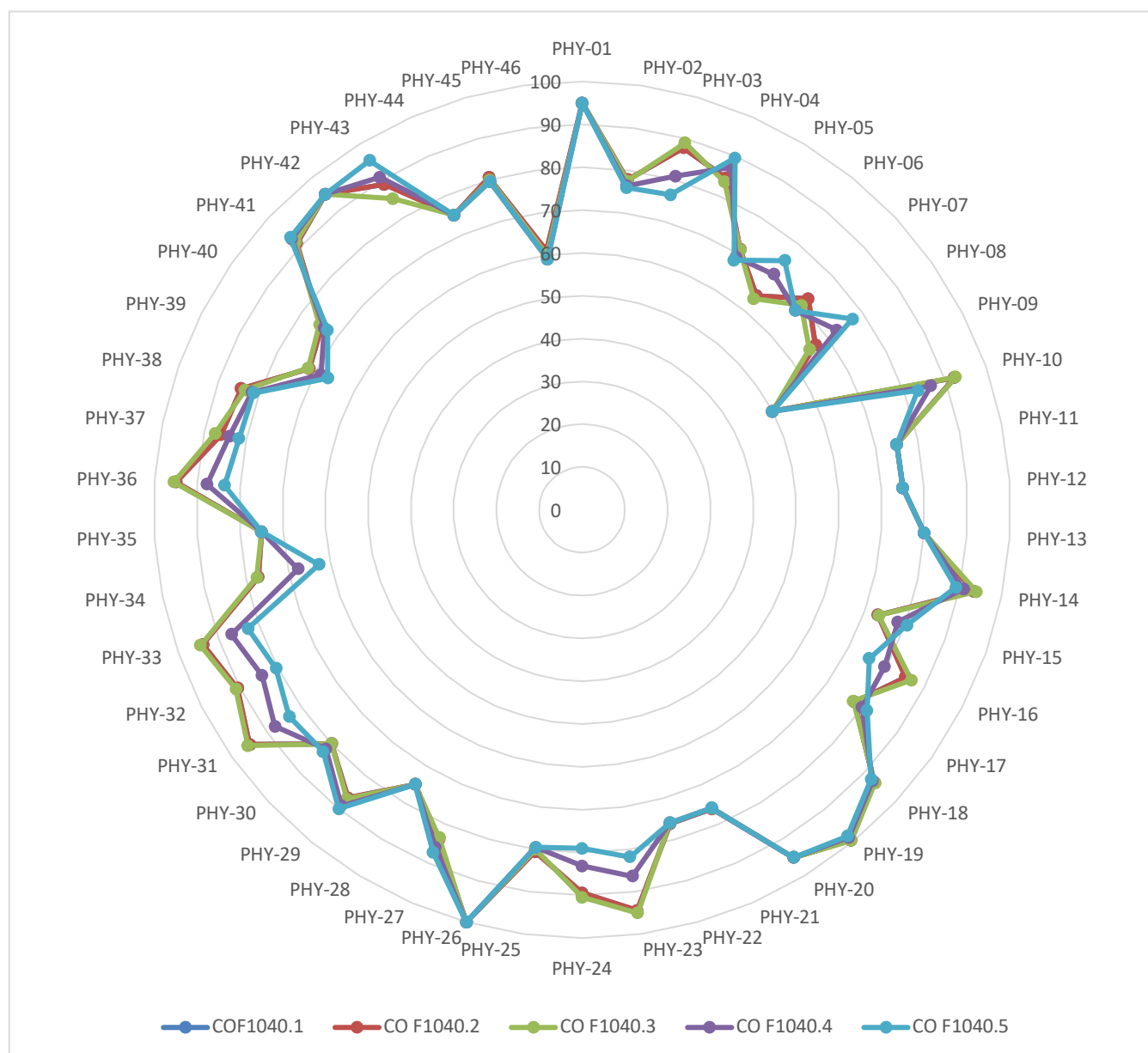
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CO MAPPING OF (Physics 1040)- Computed using Linways OBE Software & Excel spreadsheet



Learning Outcome of Department of Physics, St. Edmund's College,
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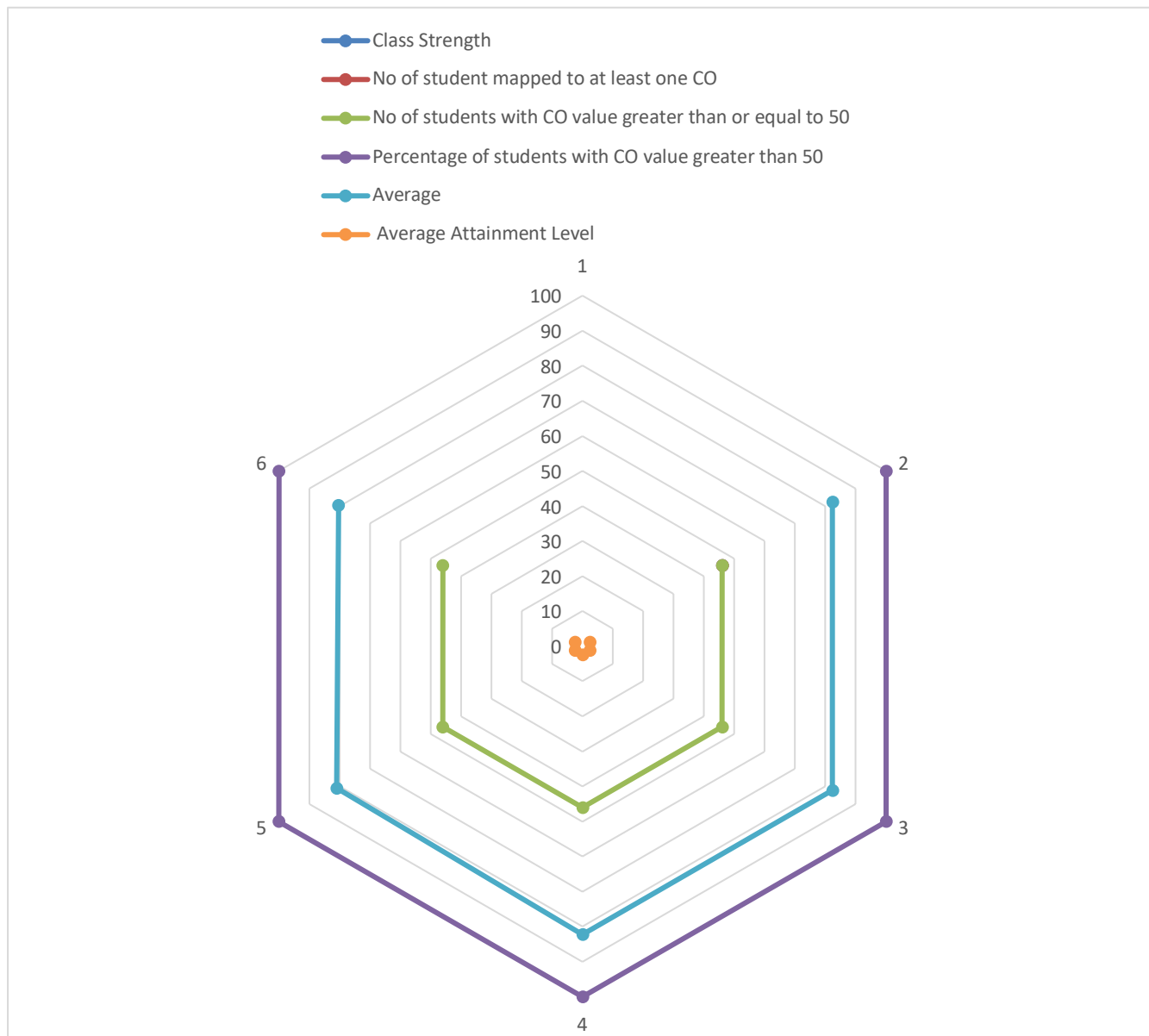
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Consolidated Average CO Attainment Level (Physics 1040)- Computed using Linways OBE Software & Excel spreadsheet



Learning Outcome of Department of Physics, St. Edmund's College,
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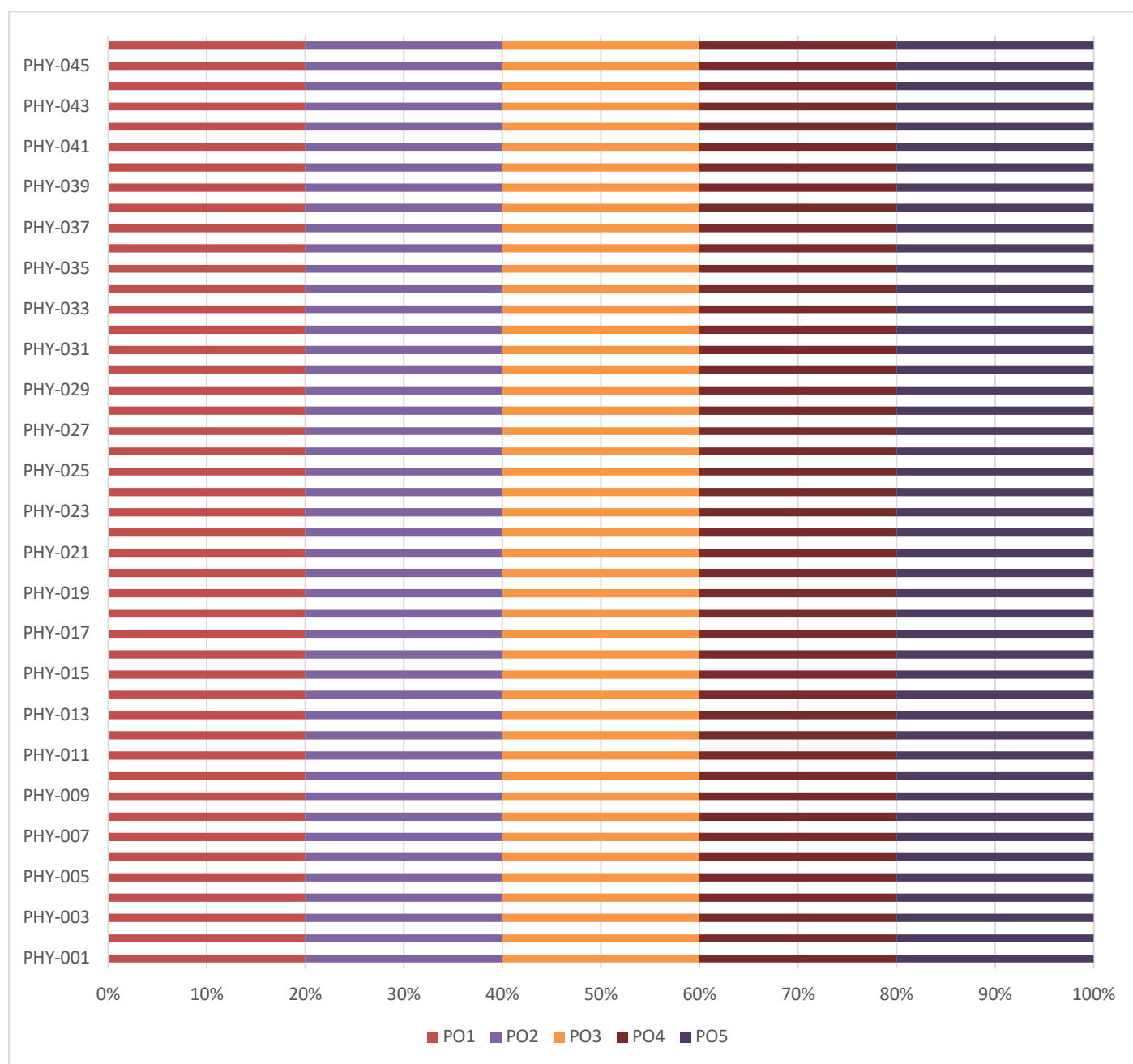
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PO MAPPING OF (Physics 1045)- Computed using Linways OBE Software & Excel spreadsheet



Learning Outcome of Department of Physics, St. Edmund's College,
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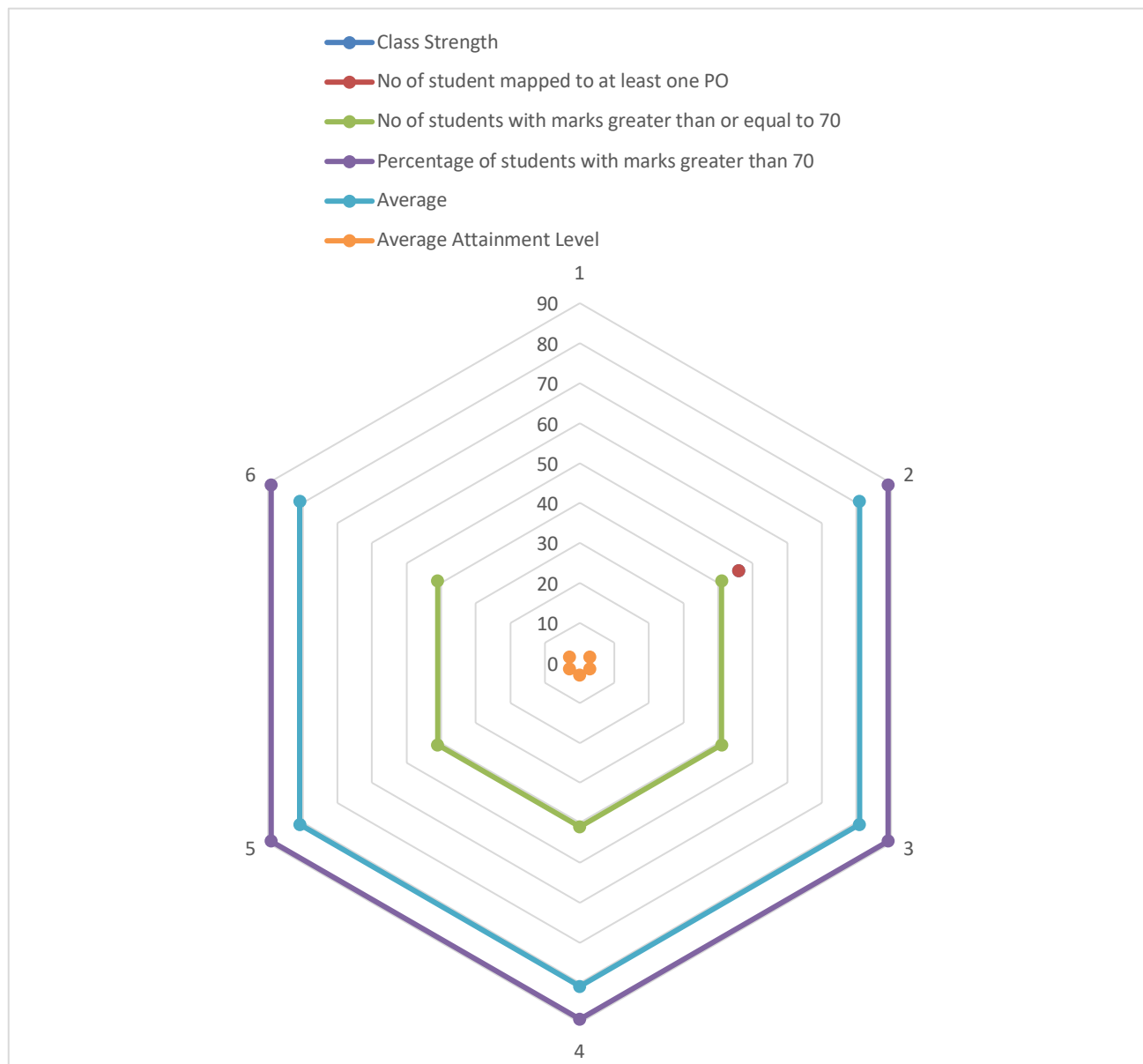
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PO MAPPING OF (Physics 1045)- Computed using Linways OBE Software & Excel spreadsheet



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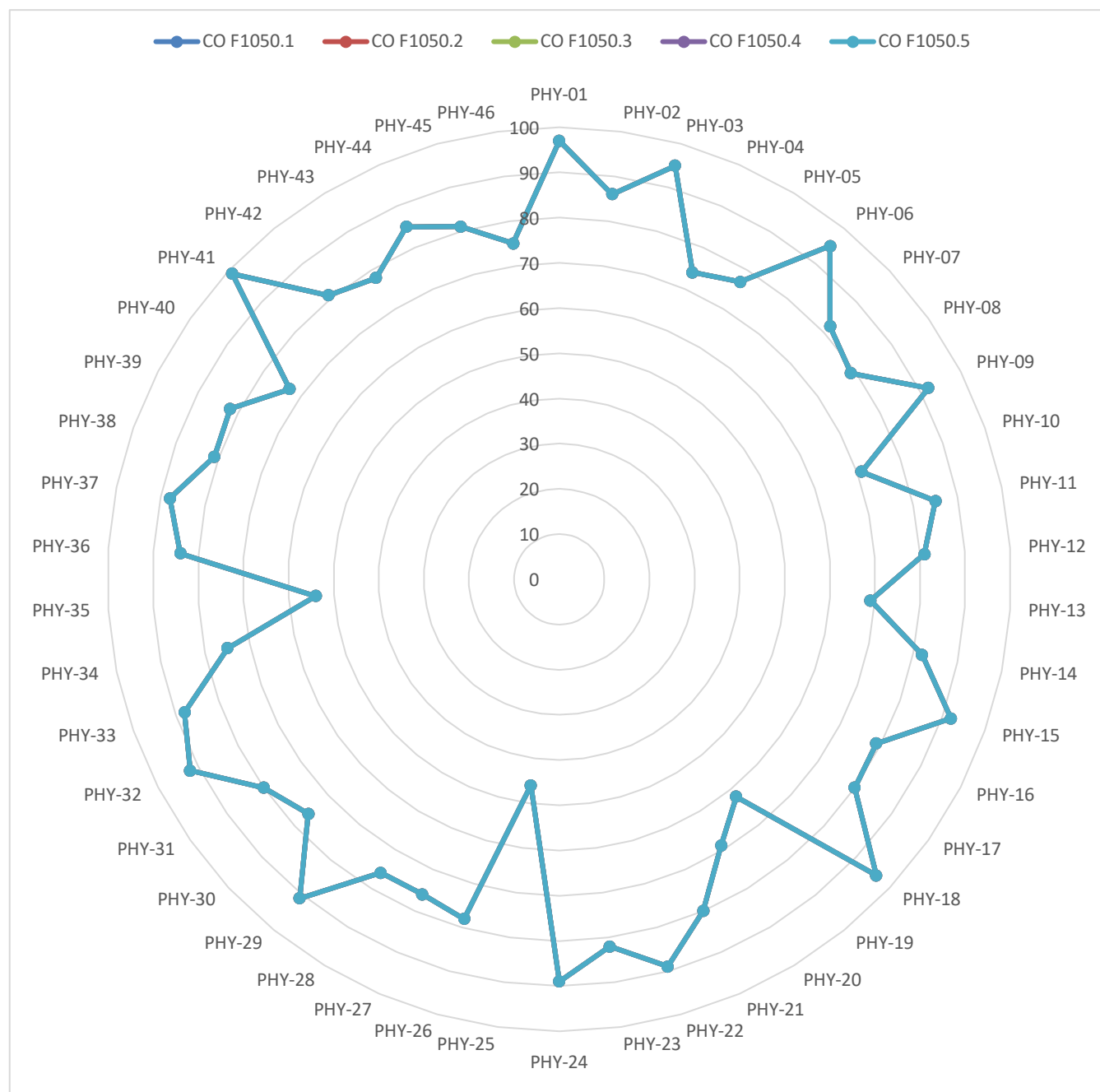
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CO MAPPING OF (Physics 1050)- Computed using Linways OBE Software & Excel spreadsheet



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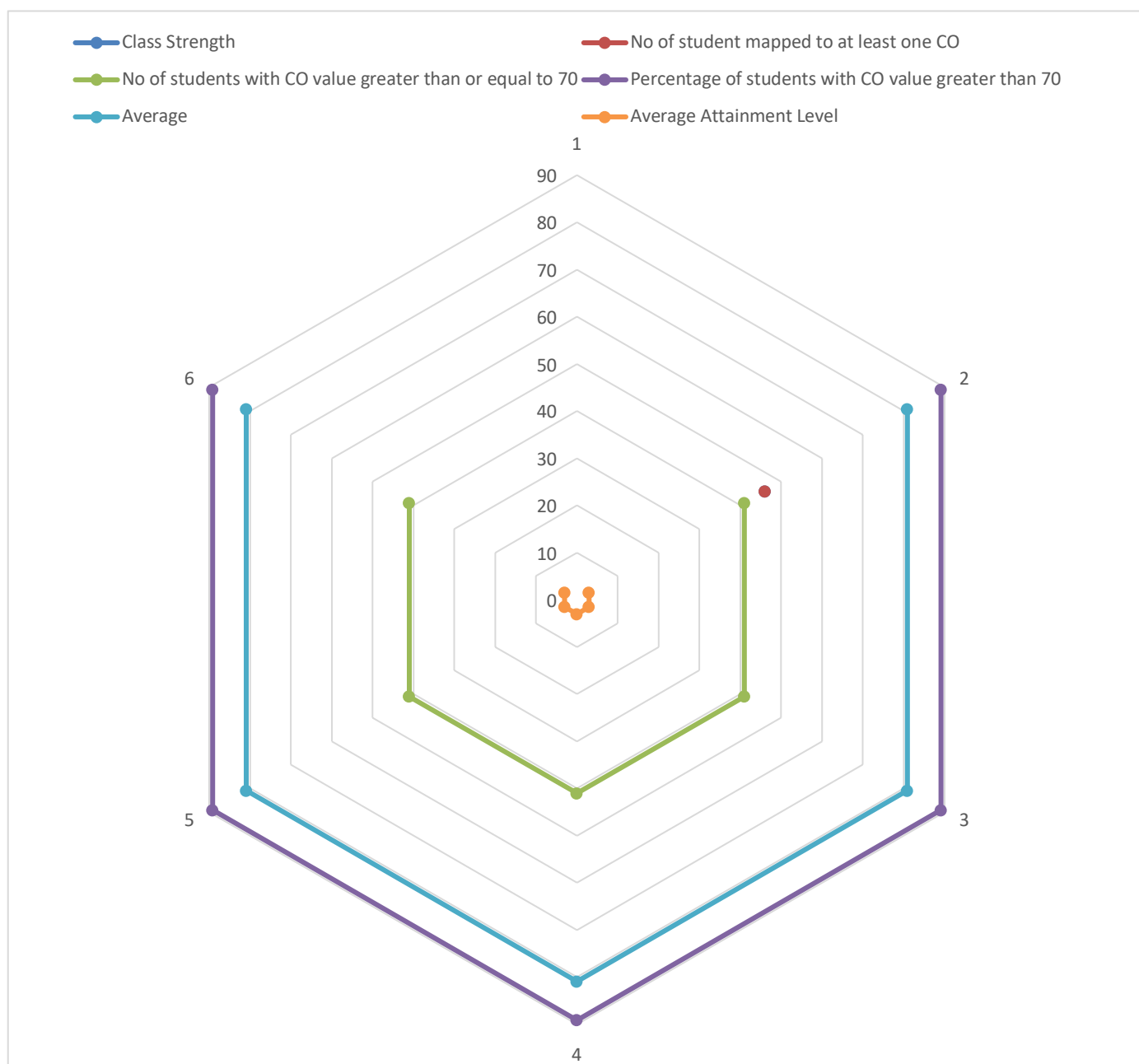
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Consolidated Average CO Attainment Level (Physics 1050)- Computed using Linways OBE Software & Excel spreadsheet



Learning Outcome of Department of Physics, St. Edmund's College,
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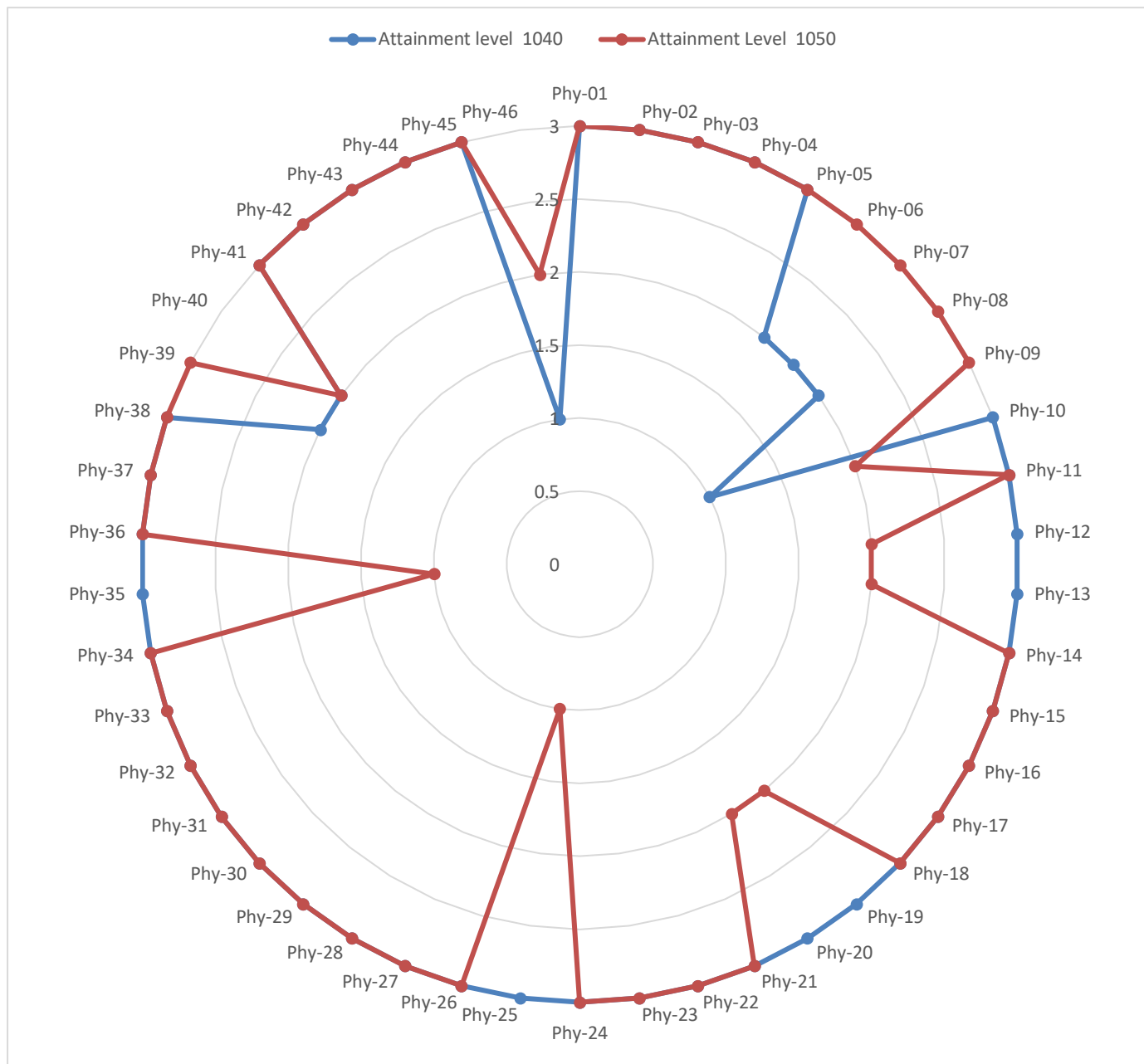
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Individual Attainment Level of individual student of (Physics 1040 & 1050) -Computed using Linways OBE Software & Excel spreadsheet



Learning Outcome of Department of Physics, St. Edmund's College,
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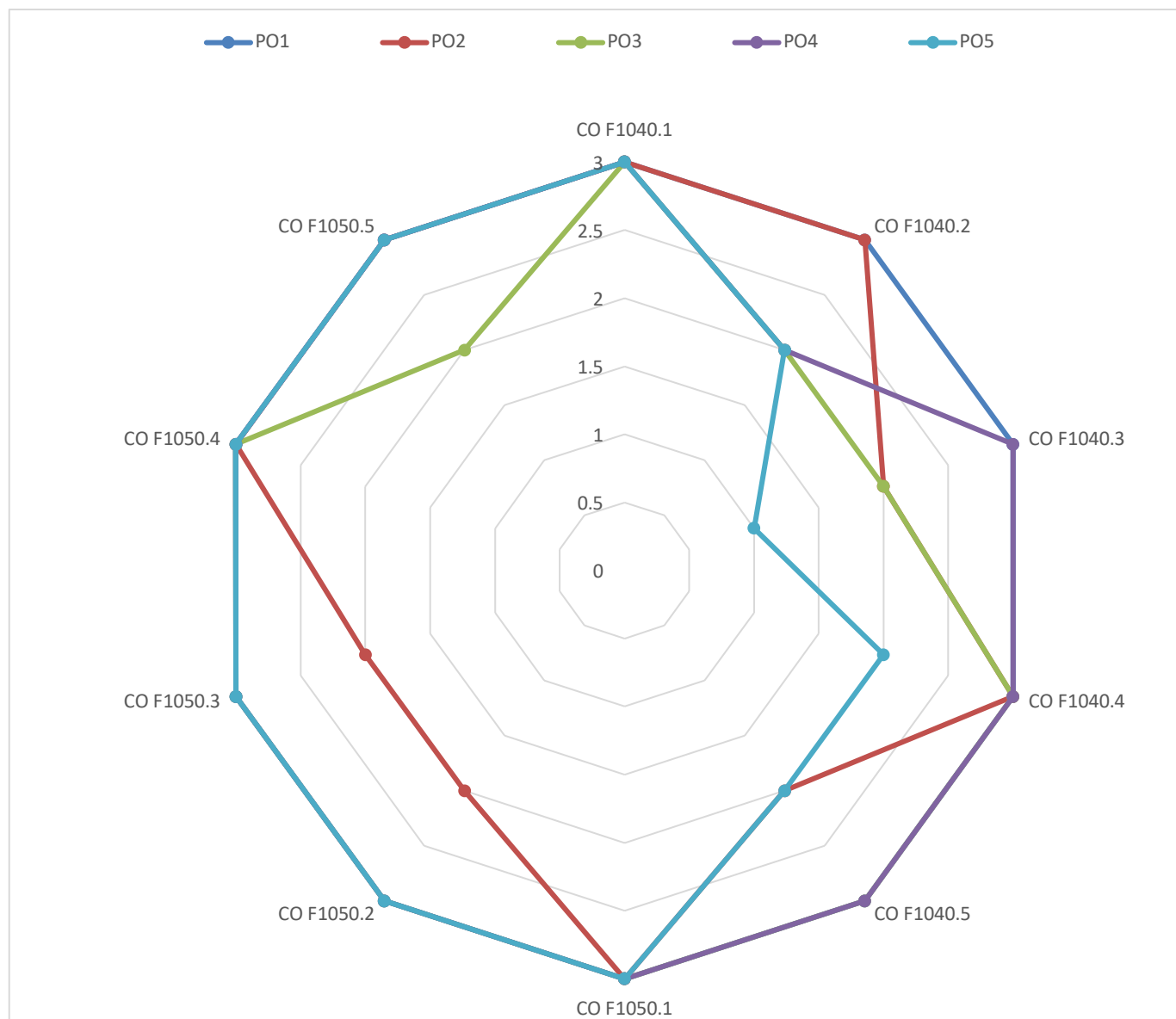
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Combined CO-PO mapping of (Physics 1040 & 1050) -Computed using Linways OBE Software & Excel spreadsheet



Learning Outcome of Department of Physics, St. Edmund's College,
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Learning Outcome

SUBJECT: Environmental Science [BATCH - 2017]

Program Outcomes (POs)

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

PO	Title	Description
PO1	Domain Expertise	Apply knowledge of Science and experiments at an appropriate level to the discipline
PO2	Skills and Ethics	Analyze a problem and define the scientific requirements, appropriate to its solution.
PO3	Lifelong Learning	Understand new concepts and be articulate while executing knowledge with peers.
PO4	Modern Tool Usage	Use current techniques, skills, and tools necessary for scientific research.
PO5	Social Contribution	Follow current 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.

Program Specific Outcomes (PSOs)

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

PSO1	The students will acquire skills for identifying environmental problems and will be able to explain environment in its totality.
PSO2	The students will be able to explain the causes of environmental degradation and can demonstrate awareness and sensitivity to the total environment and its allied problems.
PSO3	The students will be able to test and compare environmental samples.



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Course Outcomes (F1270) Environmental Chemistry)

At the end of the Chapter/Paper: VII students will be able to:

CO F1270.1	Examine the role of Microorganisms as catalysts in chemical reaction.
CO F1270.2	Give a schematic classification of pesticides.
CO F1270.3	Assess the impact of photochemical smog in environment.
CO F1270.4	Recommend an appropriate method of treatment of wastewater.
CO F1270.5	Classify the different elements of the earth.

Course Outcomes (F1280) EIA, Environmental Economics and Environmental Laws

At the end of the Chapter/Paper: VIII students will be able to:

CO F1280.1	Discuss the concept and principles of Environmental Impact assessment (EIA).
CO F1280.2	Compare the EIA Notification of 1994 and 2006.
CO F1280.3	Prepare the different steps of carrying out Environmental Impact Assessment of a project.
CO F1280.4	Examine the process and implementation of Environmental Audit.
CO F1280.5	Illustrate the steps involved in registration and certification process of ISO.

Correlation

Marks (%)	Grade	Correlation	Levels
31 - 60	1	Slight Correlation	L - Low
61 - 80	2	Moderate Correlation	M – Medium
81 - 100	3	Significant Correlation	H – High

Learning Outcome of Department of Environmental Science, St. Edmund's College, Shillong



St. Edmund's College

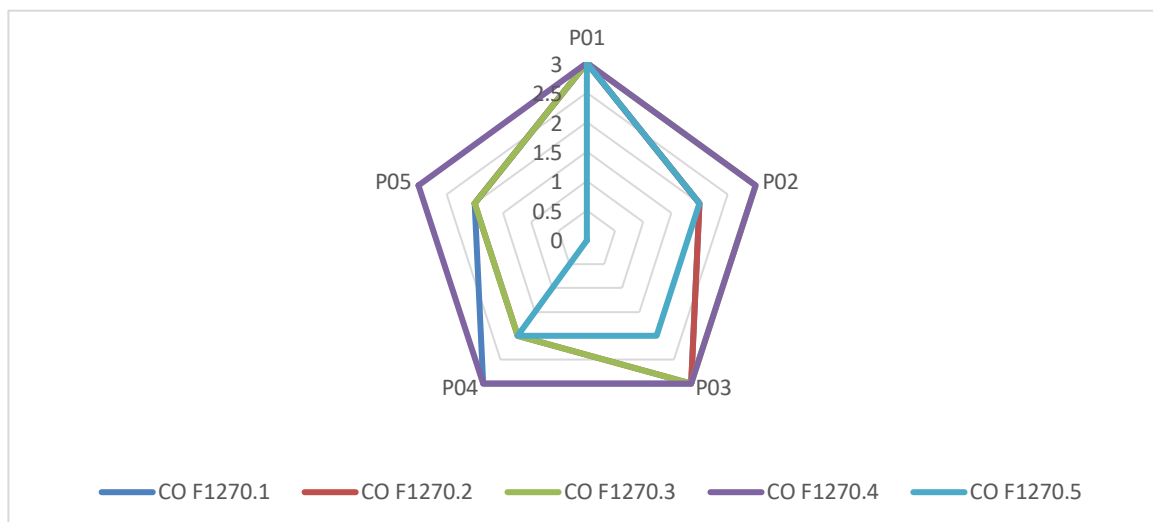
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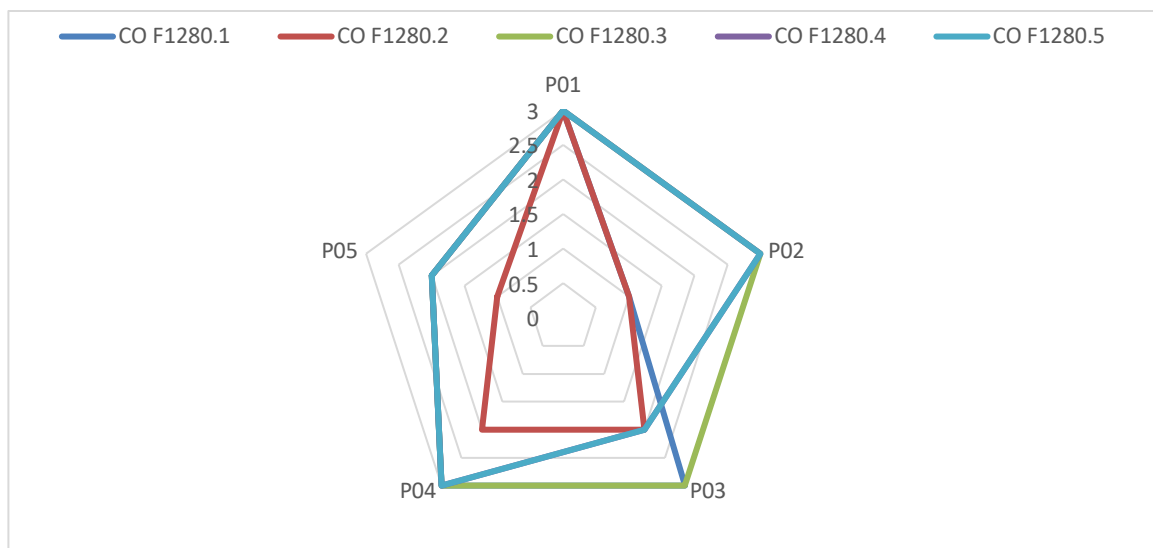
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CO – PO MAPPING OF Environmental Science Sixth Semester

CO PO MAPPING – Paper VII- Environmental Chemistry (Code 1270)



CO PO MAPPING – Paper VIII- Environmental Laws (Code 1280)



Learning Outcome of Department of Environmental Science, St. Edmund's College, Shillong



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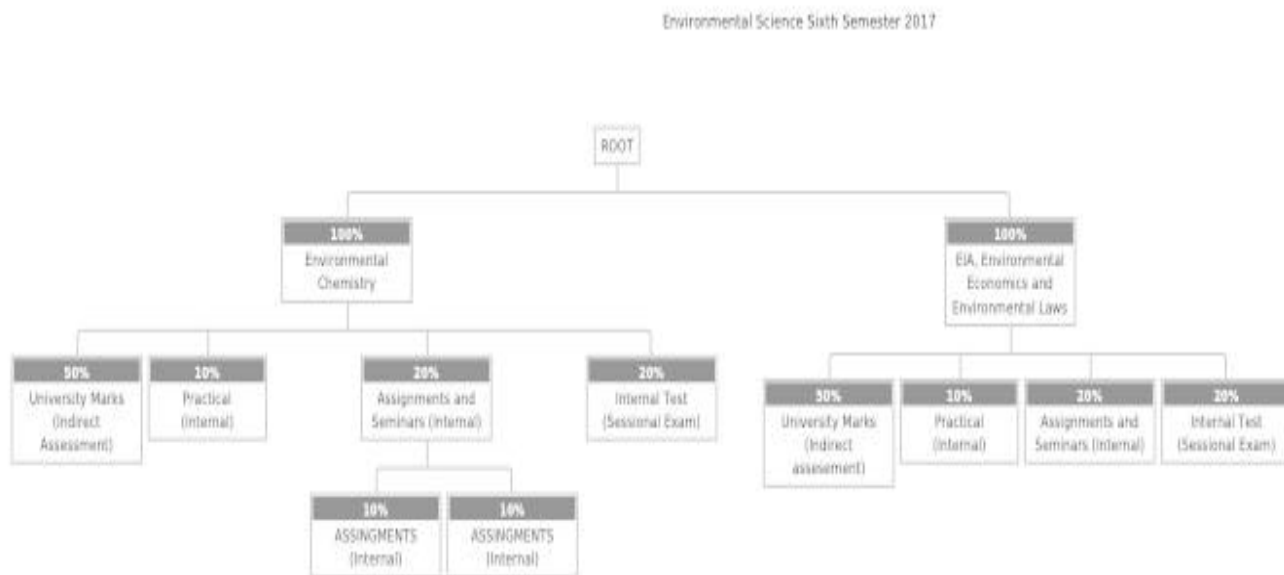
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STATISTICAL PARAMETERS FOR PO, PSOs & CO

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



Papers executed for CO-PO Mapping	
BIOT F1270-PAPER VII (T).1270	Environmental Chemistry
BIOT F1280-PAPER VII (T).1280	Environmental Laws
BIOT F1270-PAPER VII (T).1270	Assignment's, Internal test, Practical Aptitude
BIOT F1280-PAPER VII (T).1280	Assignment's, Internal test, Practical Aptitude

Learning Outcome of Department of Environmental Science, St. Edmund's College, Shillong



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CO-PO Mapping Report

CO
CO F1270.1
CO F1270.2
CO F1270.3
CO F1270.4
CO F1270.5

CO-PSO Mapping Report

CO	PO1	PO2	PO3	PO4	PO5
CO F1270.1	3.00	2.00	3.00	3.00	2.00
CO F1270.2	3.00	2.00	3.00	2.00	2.00
CO F1270.3	3.00	3.00	3.00	2.00	2.00
CO F1270.4	3.00	3.00	3.00	3.00	3.00
CO F1270.5	3.00	2.00	2.00	2.00	--

POs are not defined.

Course-PSO Mapping Report

Course	Domain Expertise	Skills and Ethics	Lifelong Learning	Modern Tool Usage	Social Contribution
EVSS F1270	3.00	3.00	3.00	3.00	3.00

CO Attainment(ROOT)

Subject/CO	CO F1270.1	CO F1270.2	CO F1270.3	CO F1270.4	CO F1270.5
EVSS F1270	--	--	--	--	--

Learning Outcome of Department of Environmental Science, St. Edmund's College, Shillong



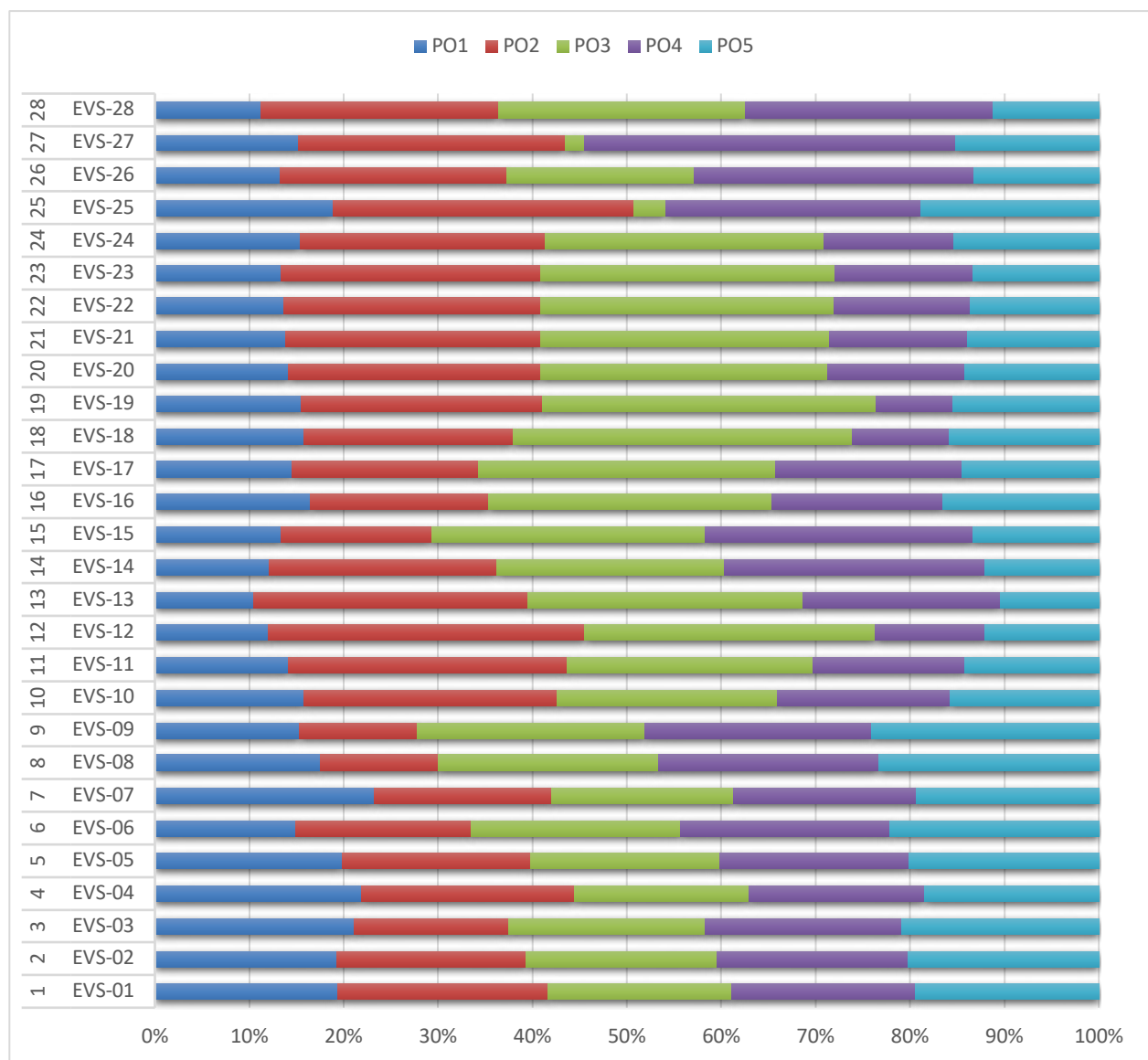
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CO PO MAPPING – Paper VII- Environmental Chemistry (Code 1270)- Computed through Linways OBE Software & Excel Spreadsheet.



Learning Outcome of Department of Environmental Science, St. Edmund's College, Shillong



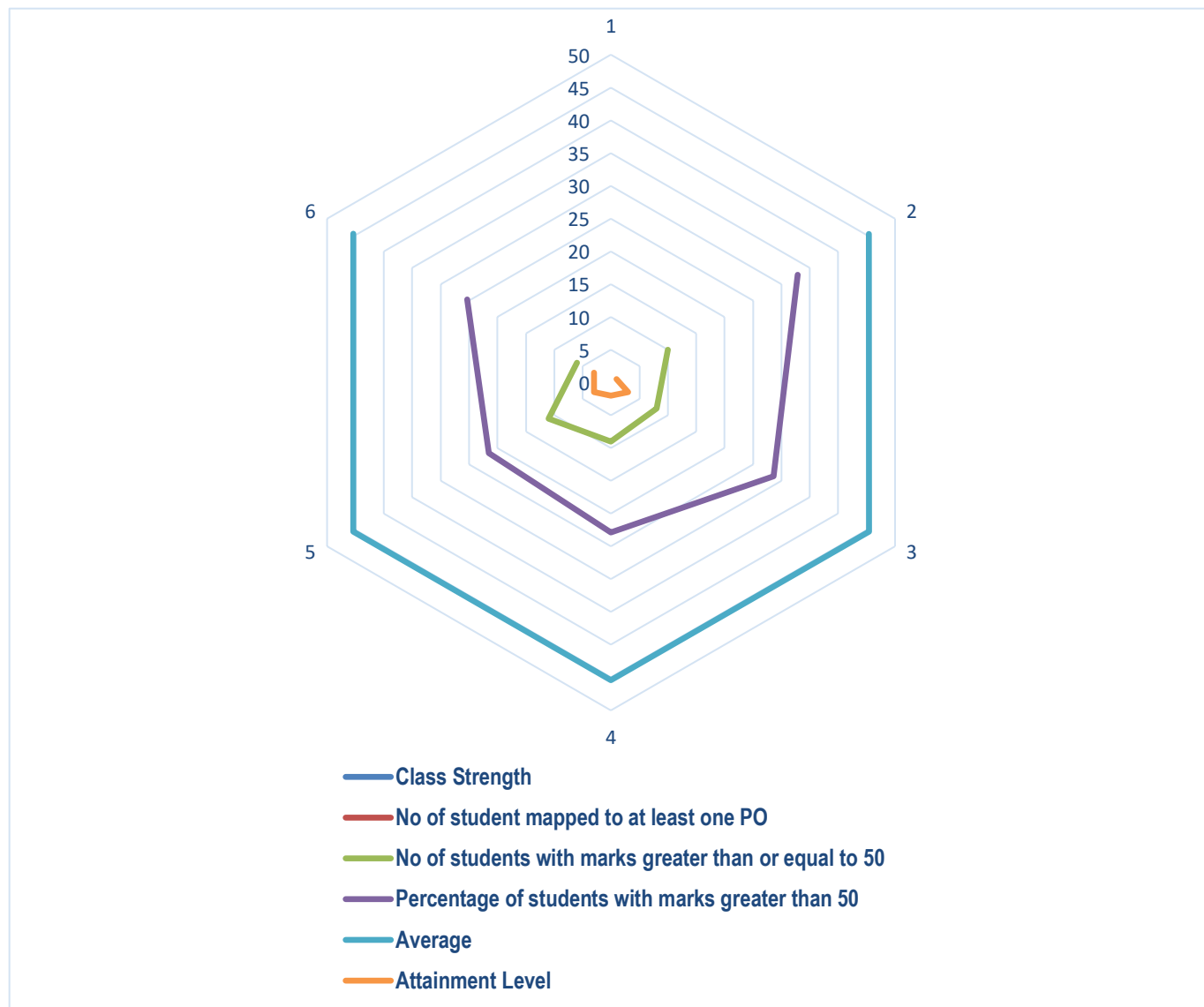
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Average Attainment Level – Paper VII- Environmental Chemistry (Code 1270) - Computed through Linways OBE Software & Excel Spreadsheet.



Learning Outcome of Department of Environmental Science, St. Edmund's College, Shillong



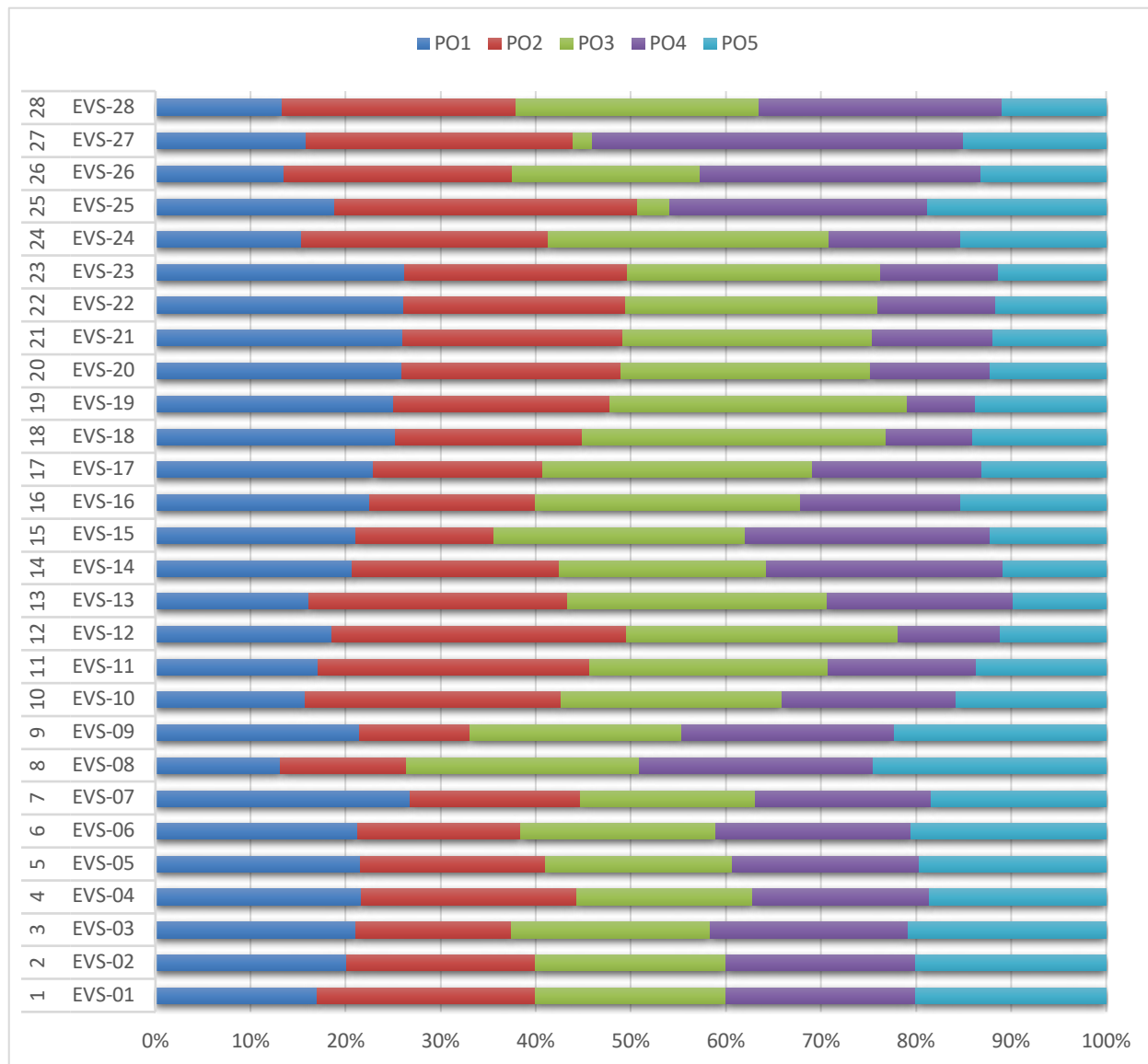
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CO PO MAPPING – Paper VIII- Environmental Laws (Code 1280) - Computed through Linways OBE Software & Excel Spreadsheet.



Learning Outcome of Department of Environmental Science, St. Edmund's College, Shillong



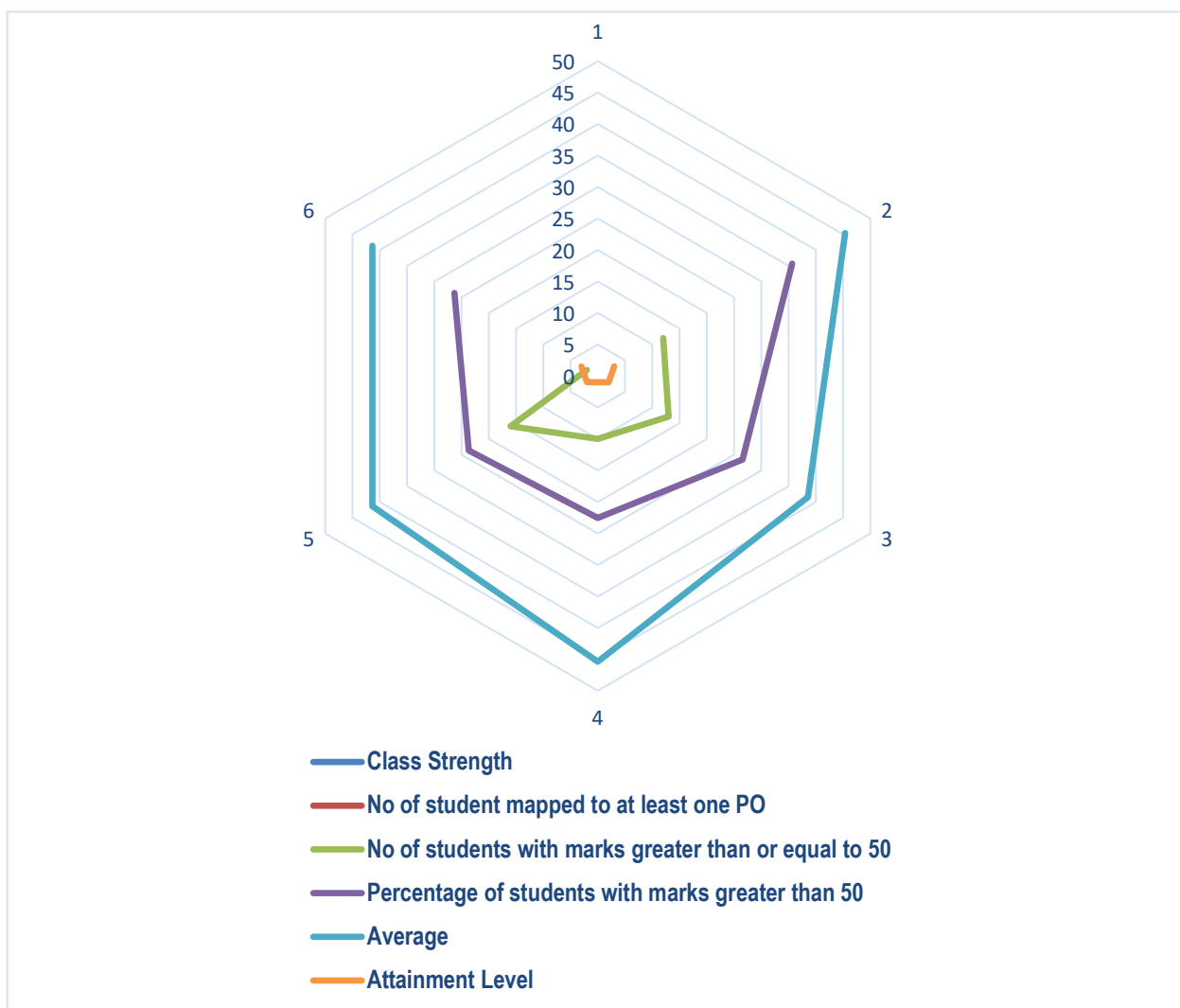
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Average Attainment Level – Paper VIII- Environmental Laws (Code 1280) - Computed through Linways OBE Software & Excel Spreadsheet.



Learning Outcome of Department of Environmental Science, St. Edmund's College, Shillong



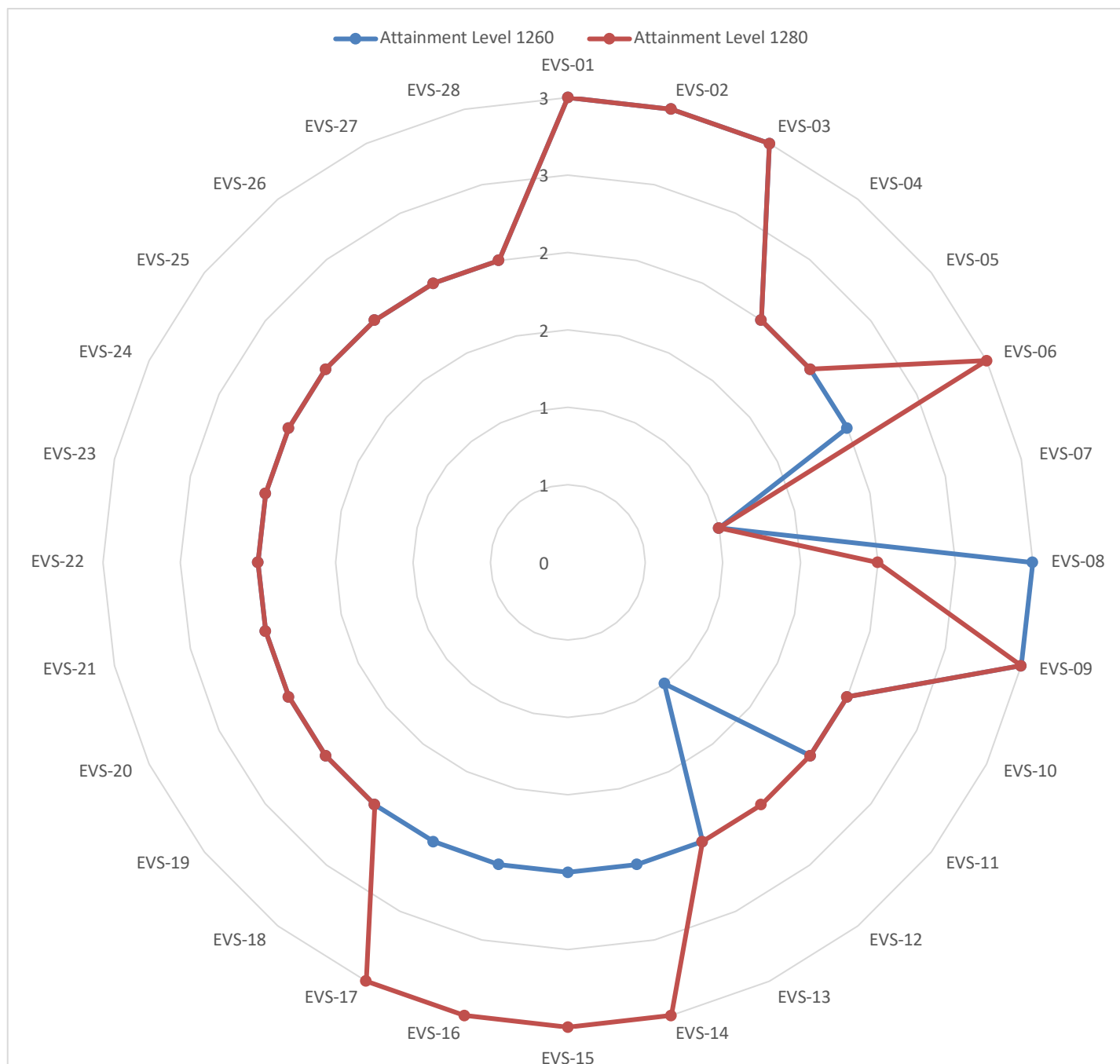
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Individual Student Attainment Level (Both Papers) - Computed through Linways OBE Software & Excel Spreadsheet.



Learning Outcome of Department of Environmental Science, St. Edmund's College, Shillong



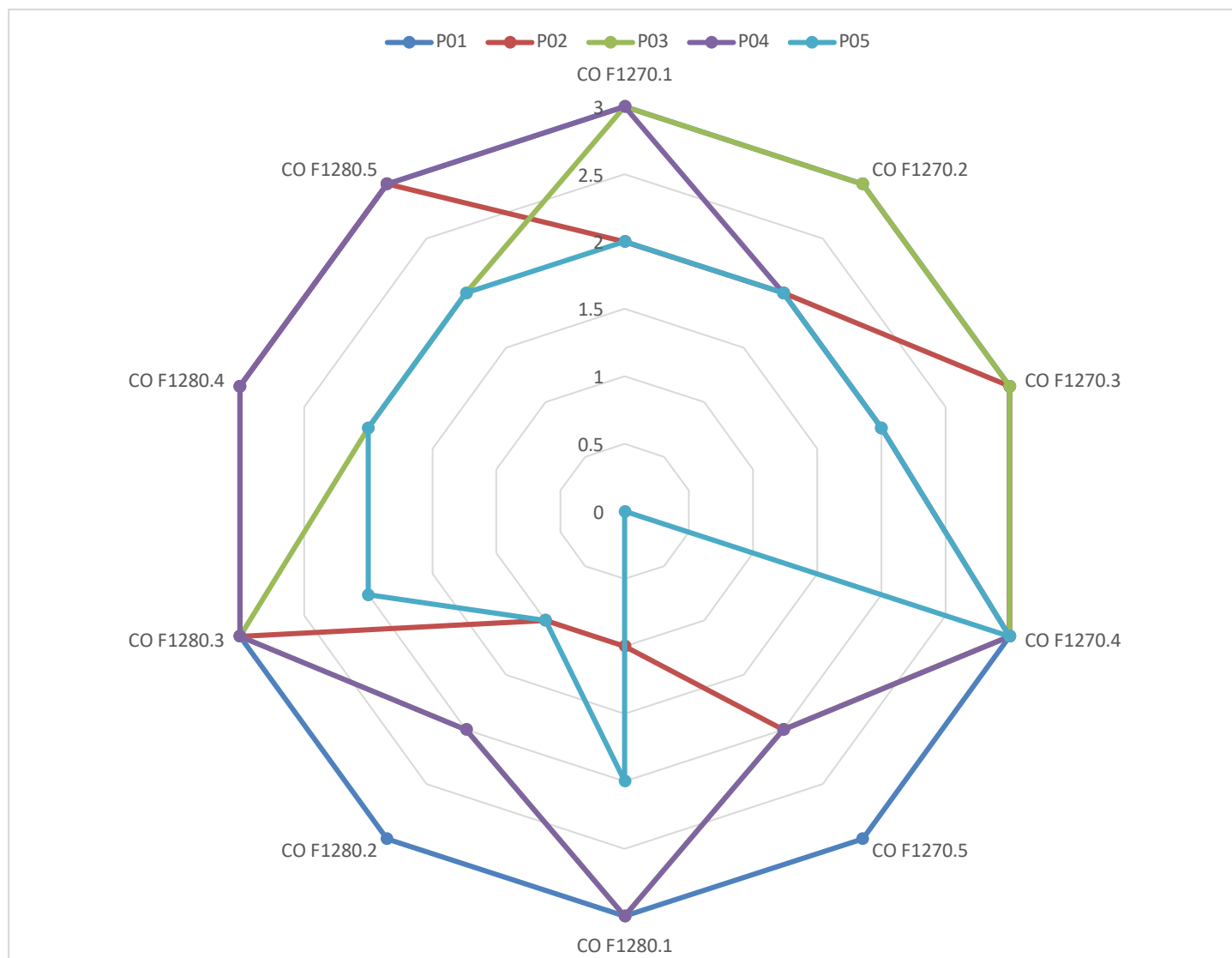
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Combined CO- PO Mapping - Computed through Linways OBE Software & Excel Spreadsheet.



Learning Outcome of Department of Environmental Science, St. Edmund's College, Shillong



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SUMMARY OF THE LEARNING OUTCOMES USING LINWAYS OBE SOFTWARE ANALYSIS

The learning outcome using the Linways OBE software are as follows:

- The parameters for the computation of the learning outcomes were based on the performance of the students of sixth semester with 2 papers as per the syllabi, 3 science departments that were shortlisted. Each parameter used for the evaluation of Learning Outcomes was as per the Cognitive Domain levels of Bloom's Taxonomy, indicating the attainments by the students.
- The analysis was performed through the direct assessment in the form of assignments, sessional examinations, reasoning ability questions and also practical skills. The indirect assessment was computed based on the marks secured by the individual at the University Examination.
- The average attainment level was computed and found to be between 2.0-3.0 for the 3 science departments – Bachelor of Computer Applications, Bachelor of Environmental Sciences and Bachelor of Physics. It was inferred that the Learning outcomes attained by the graduating batch of these 3 departments are HIGH (H).
- The final analysis was computed using graphical presentations available in the Excel Spread Sheet for better visualization and generating a radar diagram.
- The Programme Outcome (PO) – Course Outcome (CO) are shown as percentages that are secured by the individual students at the CO and the PO levels.

*****THE END*****