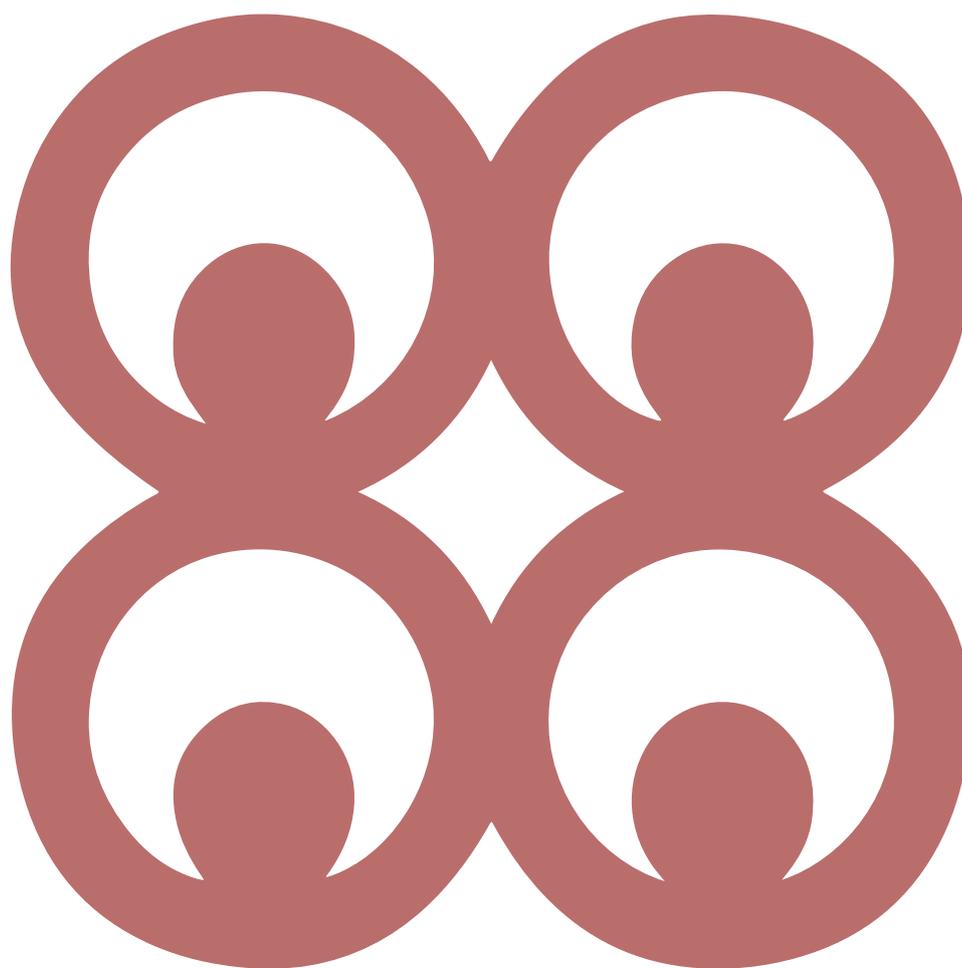


TUTOR PROFESSIONAL DEVELOPMENT HANDBOOK: B.Ed in Initial Teacher Education Science Year 4

HANDBOOK FOR TUTORS





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Transforming Teaching, Education & Learning



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**TUTOR PROFESSIONAL
DEVELOPMENT HANDBOOK:
B.Ed in Initial Teacher
Education
Science Year 4**

Tutor Version

Tutor PD Session		
Age Level/s: JHS Course Title: Physics - Properties of Matter and Electromagnetism. Chemistry - <i>Chemistry Around Us</i> Lesson Title: Measurement Errors and Dimensional Analysis	Name of Subject/s: Physics and Chemistry	
Year 4	Semester 2	
Tutor PD Session for Lesson 1 in the Course Manual		
Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1a Introduction to the semester – in session one ➤ Overview of subject/s age level/s to be covered in the PD sessions and guidance on grouping tutors according to the subject/s, age level/s. ➤ Introduction to the course manual/s ➤ Overview of course learning outcomes ➤ Introduction to the two continuous assessment components to be undertaken in each subject during the semester (See Course Assessment Components Appendix NB in subjects where there are no assessment components in the course manuals examples will need to be provided by the SWL for the SL/HoD.	1.1 Discuss the overview related to the JHS specialism from the course manual. 1.2 Sit according to your subject specialisms. <i>NOTE:</i> <i>Courses to be covered with their corresponding course titles during this semester’s PD sessions are:</i> <ul style="list-style-type: none"> ▪ <i>JHS (Physics): Properties of Matter and Electromagnetism.</i> ▪ <i>JHS (Chemistry): Chemistry Around Us</i> 1.3 Read the course descriptions, course learning outcomes and their corresponding learning indicators from your respective course manuals. <i>NOTE: This would enable you to familiarise yourselves with the course learning outcomes and their corresponding learning indicators for the semester.</i>	20 mins
1b Introduction to the session ➤ Review prior learning	1.4 Discuss the two assessment components (Subject project and subject portfolio) for the semester.	

<p>➤ Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators</p> <p>➤ Overview of content and identification of any distinctive aspects of the lesson/s,</p> <p>NB The guidance for SL/HoD should identify, address and <i>provide explanations</i> for any areas where tutors might require clarification on an aspect of the lesson.</p> <p>NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p>NOTE: <i>(Subject Portfolio: Overall weighting of project = 30%</i> <i>Weighting of individual parts of portfolio out of 100.</i></p> <p>Three (3) items of work produced during the semester selected by student teachers with tutor support during the semester as best examples of their progress and 200-word reflection on the items i.e.</p> <p>i. (a) Each of the three (3) items selected by the student teacher is 30 % (90%).</p> <p>i. (b) Presentation and organization of portfolio 10%.</p> <p>OR</p> <p>ii. (a). Each of the two (2) items selected by the student teacher is 30 % (60%).</p> <p>ii(b)Mid semester assessment 30%</p> <p>ii. (c) Presentation and organization of portfolio 10%.</p> <p>Subject Project: Overall weighting of project = 30% Weighting of individual parts of project out of 100%</p> <ul style="list-style-type: none"> ➤ Introduction – 10% ➤ Methodology – 20% ➤ Substantive section – 40% Conclusion – 30% <p>Suggested examples for subject <u>Project</u></p> <ul style="list-style-type: none"> ➤ Lab reports ➤ Integrating indigenous knowledge into science teaching. ➤ Charts, graphs created ➤ Designs, TLMs, posters, worksheets <p><u>Subject Portfolio</u></p> <ul style="list-style-type: none"> ➤ STS Portfolio ➤ Action Research reports. <p>1.5 Write two things you learnt during Year 3 semester 2 PD sessions.</p>	
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	<p>1.5.1. Explain how you applied what you have written in your varied lessons.</p> <p>1.6. Discuss lessons on Basic Chemistry II and come out with challenges you faced and how you overcame them from the previous semester lessons.</p> <p>1.7. Read and discuss the introduction sections of the lesson up to learning indicators from your course manuals.</p> <p><i>Note: Some of the learning outcomes and their corresponding indicators for Physics and Chemistry are:</i></p> <p><u>Chemistry:</u> <u>L.O</u> <i>Demonstrate the ability to transfer knowledge and skills from one lesson onto developing new concepts (NTS 2e & 2f, p.13.</i></p> <p><u>LI</u> <i>Present a checklist on new expectations based on the links between Basic chemistry II and chemistry around us.</i></p> <p><u>Physics:</u> <u>LO</u> <i>Demonstrate knowledge and understanding in the various errors involved in scientific measurement and apply dimensional analysis in determining relations among physical quantities. (NTS 1a, 2a, Pg. 18 &20)</i></p> <p><u>LI</u> <i>Show exercises in student teachers' workbook on errors and limitations of scientific measurement, and the relation of derived quantity to its basic quantity.</i></p> <p>1.8. Explain how the course learning outcomes and their corresponding indicators are related to student teachers' relevant previous knowledge.</p>	
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	1.9. Identify and discuss the distinctive features of lesson 1 for the two courses from the course manuals.	
<i>As this course is dealing with supporting and/or assessing the Professional Teaching Portfolio Development and/or Classroom Enquiry and Action Research Project, Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.</i>	<p>1.1. Discuss the need to develop professional teaching portfolio in your respective groups.</p> <p>1.1.1. List the artefacts of a professional teaching portfolio and show how you will help student teachers to develop their own professional teaching portfolio in their respective basic schools when posted. (Refer to Y3S2 STS Handbook Pg. 114-118).</p> <p>1.2. Explain how they will assist the initial teachers to complete their classroom enquiry report. Refer to Y3 STS Pg. 91-100.</p> <p>1.3. Explain how you would assist initial teachers to discuss some professional practices of their mentors and co-mentees. (Refer to NTS 3a-3p, pg. 14).</p>	
<i>For each session remember this is the final semester before Students start teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.</i>	1.13. Identify the cross-cutting issues in the course manual and explain how you can help the initial teachers to implement them in the basic school classroom after posting.	
<p>2 Concept Development (New learning likely to arise in lesson/s):</p> <p>➤ Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD</p> <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors</p>	<p>2.1. List and discuss the major concepts in lesson 1.</p> <p>2.2. Discuss the potential misconceptions and barriers with respect to the concepts listed.</p> <p>2.3. Identify the most appropriate teaching strategies that can be employed to best deliver the new concepts in both CoE and basic school classroom to achieve the LOs and the LIs of the lesson.</p>	15 mins

<p>3.Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> ➤ Reading and discussion of the teaching and learning activities ➤ Noting, addressing, and explaining areas where tutors may require clarification ➤ Noting opportunities for making <i>explicit</i> links to the Basic School Curriculum ➤ Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills ➤ Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning ➤ Resources: <ul style="list-style-type: none"> ○ links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, YouTube, physical resources, power point; how they should be used. Consideration needs to be given to local availability ○ guidance on any power point presentations, TLM or other resources which need to be developed to support learning ➤ Tutors should be expected to have a plan for the next lesson for student teachers 	<p>3.1. Read and discuss the teaching and learning activities in the course manuals for the two course levels.</p> <p><i>Note: Tutors should go through the activities one after the other taking into consideration the time available, resources and nature of learners, coherency and methodology.</i></p> <p>3.1.1. Identify and discuss areas that need clarification.</p> <p>3.2. Discuss how the different activities would be carried out in both CoE and basic school classroom to achieve the LOs and the LIs of lesson 1 from your course manuals.</p> <p>Note: <i>Ensure that the language used in instructing learners to carry out the varied activities is gender responsive. E, g. Do not use harsh, threatening language or actions that instil fear in both females and males.</i></p> <p>3.3. Discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed.</p> <p><i>E g. (i). Pay attention to slow learner. (ii). Assign leadership roles to females and males equally.</i></p> <p>3.3. Explain how you would assist the student teachers to demonstrate the 21st century skill in the basic school classroom.</p> <p>3.5. Read the assessment activities in the various course manuals and identify areas that require clarification.</p> <p>3.4. Identify the inclusive resources needed for teaching and learning of the concepts in both CoE and basic school classrooms.</p>	<p>15mins</p>
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	<p><i>E.g., Games-Bingo, Audio-visuals from YouTube in relation to teaching measurement, samples of individual tutor learning plans.</i></p> <p>Note: <i>Make sure the resources are enough and appropriate to all learners (males, females and persons with SEN)</i></p>	
<p>4. Evaluation and review of session:</p> <p>a. Tutors need to identify critical friends to observe lessons and report at next session</p> <p>b. Identifying and addressing any outstanding issues relating to the lesson/s for clarification</p>	<p>4.1. Identify a critical friend who took part in the PD session to sit in your class during lesson to provide feedback and report on observations made in the next PD session.</p> <p>4.2. Discuss anything relating to Lesson 1 that needs clarification.</p> <p>4.3. Read lesson 2 from the PD manual and find relevant materials for the next session.</p>	<p>15 mins</p>

Tutor PD Session		
Age Levels/s: JHS Course Title/s: Physics- Properties of Matter and Electromagnetism Chemistry: Chemistry Around Us Lesson Title: Physics- Fluid at rest Chemistry: Chemical bonding in substances	Name of Subject/s: Physics & Chemistry	
Year 4	Semester 2	
Tutor PD Session for Lesson 2 in the Course Manual		
Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1 Introduction to the session <ul style="list-style-type: none"> ➤ Review prior learning ➤ A critical friend to share findings for a short discussion and lessons learned ➤ Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators ➤ Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should identify, address and <i>provide explanations</i> for any	1.1 Write one thing that didn't go on well in the reviewed lesson of the previous PD session and tell how it affected your lesson. 1.2 Invite your critical friends to share their observations made during lesson delivery and discuss the suggestions provided. 1.3 Read and discuss the introductory sections of the lesson up to course learning outcomes and indicators from your course manuals. Note (1): <i>The topics and lesson introduction/descriptions for lesson 2 at the various course levels are:</i> JHS (Physics) Topic: <i>Fluid at rest.</i> Lesson Description - <i>In this lesson, Tutor discusses fluid at rest with student teachers. Thus, student teachers will be introduced to measurements and calculations of density and relative density. Definition and calculation of pressure will also be introduced to student teachers.</i>	20 mins

<p>areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p><i>JHS (Chemistry) Topic: Chemical bonding in substances</i></p> <p>Lesson Description - <i>The lesson is designed to make student teachers reflect substances in the home and environment and how they are formed (bonding) as well explain their characteristics using the knowledge of how they are formed.</i></p> <p><i>E.g., 2. Physics CLO: Demonstrate adequate knowledge of physics principles in fluids at rest, basic fluid properties and the physical laws that govern fluid behaviour. (NTS 2a, Pg. 20)</i></p> <p><i>Physics CLI: Provide worked examples on relation of mass, volume and density ($m = v\rho$) and friction in liquid properties of viscous substance.</i></p> <p>1.3.1. Explain how the course learning outcomes and their corresponding indicators are related to student teachers' relevant previous knowledge.</p> <p>1.4. Identify and discuss the distinctive features of lesson 2 for the two courses from the course manuals.</p> <p>NOTE Distinctive Features JHS (Physics):</p> <ul style="list-style-type: none"> ➤ <i>Measurement of Density and Relative density</i> ➤ <i>Calculation of Density and relative density</i> ➤ <i>Definition and calculation of pressure</i> ➤ <i>Fluid at rest (Density, Relative density and pressure)</i> <p>Distinctive Features JHS (Chemistry):</p> <ul style="list-style-type: none"> ➤ <i>Physical Properties of Compounds</i> ➤ <i>Chemical properties</i> ➤ <i>Bonding</i> 	
<p>As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom</p>	<p>1.1. Discuss the activities that the student teachers are supposed to undertake with their mentors by the end of the extending placement during post internship seminar.</p>	

<p>Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.</p>	<p><i>Some Examples are:</i></p> <ul style="list-style-type: none"> ➤ <i>Undertake an action research project to improve the learning opportunities of an agreed group of pupils to promote greater inclusion.</i> ➤ <i>Discuss key features of the school curriculum, including issues of continuity and progression both within their specialism and across all the subjects they will teach. (Refer to Y3 STS Handbook, Page 7.)</i> <p>1.2. Brainstorm on the meaning of teaching philosophy and together come out with the most appropriate meaning.</p> <p>1.3. Describe how you will review the general guidelines/steps for writing a teaching philosophy statement with student teachers.</p> <p>1.4. Write down your own example of a teaching philosophy statement and share it with the le group.</p>	
<p><i>For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.</i></p>	<p>1.9. Identify the features of GESI responsive classroom set-up and explain how you can help the initial teachers to implement them in the basic school classroom after posting.</p>	
<p>2 Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> ➤ Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD <p>NB The guidance for SL/HoD should set out</p>	<p>2.1. List and discuss the major concepts in a lesson</p> <p>2.2. Discuss the potential misconceptions and barriers concerning the concepts listed.</p> <p>2.3. Identify the most appropriate teaching strategies that can be employed to best deliver the new concepts in both CoE and basic school classrooms to achieve the LOs and the LIs of the lesson.</p> <p><i>E.g. (i) Demonstration / practical activity that is GESI responsive on how an object floats in water (Tutor guides student teachers to do hands-on/ practical activities, discuss and calculate the density ($m = \rho v$) and relative density in an</i></p>	<p>15 mins</p>

<p>what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.</p>	<p>inclusive, multi-grade, and developmentally appropriate classrooms.) <i>(ii) Video/ multimedia simulation on the concept of density and how objects float.</i> <i>(iii). Group presentation</i></p> <p>For videos on float and sink go to:</p> <p>https://www.youtube.com/user/learningjunction</p> <p>https://www.youtube.com/watch?v=Oe6bDTL3YQg</p> <p>https://www.youtube.com/watch?v=kE8l_M2pyg8</p>	
<p>3.Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> ➤ Reading and discussion of the teaching and learning activities ➤ Noting, addressing, and explaining areas where tutors may require clarification ➤ Noting opportunities for making <i>explicit links</i> to the Basic School Curriculum ➤ Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills ➤ Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning, subject specific examples should be provided for SL/HoD 	<p>3.1. Read and discuss the teaching and learning activities in the course manuals for the two course levels.</p> <p><i>Note: Go through the activities one after the other taking into consideration the time available, resources and nature of learners, coherency and methodology.</i></p> <p>3.1.1. Identify and discuss areas that need clarification.</p> <p>3.2. Discuss how the varied activities would be carried out in both CoE and basic school classroom to achieve the LOs and the LIs of lesson 2 from your course manuals.</p> <p>Note: <i>Ensure that the language used in instructing learners to carry out the varied activities is gender responsive.</i></p> <p><i>E. g.,1: Instead of “When everyone contributes <u>his</u> ideas, the discussion will be a success”.</i> <i>It may read: “When everyone contributes <u>his or her</u> ideas, the discussion will be a success”.</i></p> <p><i>2. Do not use harsh, threatening language or actions that instil fear in both females and males.</i></p> <p>3.3. Discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed.</p> <p><i>E g. (i). Prepare and use TLRs that attract the attention and interest of both female and male students, such as short video on science concept to be learned.</i></p>	<p>40 mins</p>

<ul style="list-style-type: none"> ➤ Resources: links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, YouTube, physical resources, power point; how they should be used. Consideration needs to be given to local availability ➤ Tutors should be expected to have a plan for the next lesson for student teachers 	<p><i>(ii). Attract the interest of both female and male Students and motivate them.</i></p> <p>3.4. Explain how you would assist the student teachers to demonstrate the 21st century skill in the basic school classroom.</p> <p>3.5. Read the assessment activities in the various course manuals and identify areas that require clarification.</p> <p>3.6. Identify the inclusive resources needed for teaching and learning of the concepts in both CoE and basic school classrooms. <i>E.g., Games-Going Fishing, Audio-visuals from YouTube in relation to teaching density and relative density as well as calculations of pressure.</i></p> <p>Note: <i>(i). Make sure the resources are enough and appropriate to all learners (females, males, and persons with SEN).</i></p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ➤ Tutors should Identifying critical friends to observe lessons and report at next session ➤ Identifying and addressing any outstanding issues relating to the lesson/s for clarification 	<p>4.1. Identify a critical friend who took part in the PD session on lesson 2 to sit in your class during lesson to provide feedback and report on observations made in the next PD session.</p> <p>4.2. Discuss anything relating to Lesson 2 that needs clarification.</p>	15 mins

Tutor PD Session		
Age Levels/s: JHS Course Title/s: Physics- Properties of Matter and Electromagnetism Chemistry: Chemistry Around Us Lesson Title: Physics- Electricity Chemistry: Hydrogen ion Concentration (pH) in Systems	Name of Subject/s: Physics & Chemistry	
Year 4	Semester 2	
Tutor PD Session for Lesson 3 in the Course Manual		
Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1 Introduction to the session ➤ Review prior learning ➤ A critical friend to share findings for a short discussion and lessons learned ➤ Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators ➤ Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should identify, address and <i>provide explanations</i> for any areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session	1.1. Write two things you learned during the previous PD session on a post in card and tell how it affected your lesson positively. 1.2. Invite your critical friends to share their observations made during lesson delivery and discuss the suggestions provided. 1.3. Read and discuss the introductory sections of the lesson up to course learning outcomes and indicators from your course manuals. Note (1): <i>The topics and lesson introduction/descriptions for lesson 2 at the various course levels are:</i> JHS (Physics) Topic: <i>Electricity</i> Lesson Description - <i>In this lesson, Tutor discusses Electricity with student teachers. The following topics will be introduced to student teachers under Current Electricity; Electric circuits, Potential difference (v), Resistance (Ω), and Ohm's law.</i> JHS (Chemistry) Topic: <i>Hydrogen ion Concentration (pH) in Systems</i>	20 mins

	<p>Lesson Description - The lesson is designed to further improve student teachers' conceptual understanding of chemicals (Acids and Alkalis or bases) and to guide student teachers to be able to present this in practical ways for the JHS learner.</p> <p>E.g., 2. Chemistry CLOs:</p> <ul style="list-style-type: none"> ➤ Demonstrate knowledge and skills in identifying pH in systems (NTS 2c, p.13) ➤ Demonstrate the ability to explain the concepts of pH to JHS learners. <p>Chemistry CLIs:</p> <ul style="list-style-type: none"> ➤ Present concept maps on pH in systems in the home. ➤ Demonstrate how to explain the concepts to their peers. <p>1.3.1. Explain how the course learning outcomes and their corresponding indicators are related to student teachers' relevant previous knowledge.</p> <p>1.4. Identify and discuss the distinctive features of lesson 3 for the two courses from the course manuals.</p> <p>NOTE Distinctive Features JHS (Physics):</p> <ul style="list-style-type: none"> ➤ Current Electricity (Electric circuits, Potential difference (v), Resistance (Ω) and Ohm's law) <p>Distinctive Features JHS (Chemistry):</p> <ul style="list-style-type: none"> ➤ The concepts of pH (Hydrogen ion concentration in systems) ➤ Importance of pH in the food industry. 	
<p>As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with</p>	<p>1.5. List the thematic areas which the classroom inquiry and action research write-up follow and share with the whole group.</p> <p>1.5.1. Explain how you will review the scope of each thematic area of a</p>	

<p>guidance on what to do including organisation of Post Internship Seminar.</p>	<p>classroom inquiry and action research project report/write-up with student teachers during the post-internship seminar.</p> <p>1.6. Discuss how you would share the purposes of the Teacher Licensure Examination with student teachers during the post-internship seminar.</p> <p>1.7. Identify the licensing process for Newly Qualified Teachers (NTQs) which you have to share with the student teachers during the post-internship seminar.</p>	
<p><i>For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.</i></p>	<p>1.8. Identify decisions that needed to be made during GESI responsive lesson planning and explain how you can help the initial teachers to implement them in the basic school classroom after posting.</p> <p>1.9. Discuss GESI responsive teaching methodologies and learning activities and how you would help the initial teachers to implement them in the basic school classroom after posting.</p>	
<p>2 Concept Development (New learning likely to arise in lesson/s):</p> <p>➤ Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD</p> <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.</p>	<p>2.1. List and explain the major concepts in lesson 3.</p> <p>2.2. Discuss the potential misconceptions and barriers concerning the concepts listed.</p> <p>2.3. Identify the most appropriate teaching strategies that can be employed to best deliver the new concepts in both CoE and basic school classroom to achieve the LOs and the LIs of the lesson.</p>	15 mins

<p>3.Planning for teaching, learning and assessment activities for the lesson/s</p> <p>Reading and discussion of the teaching and learning activities Noting, addressing, and explaining areas where tutors may require clarification Noting opportunities for making <i>explicit links</i> to the Basic School Curriculum Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning, subject specific examples should be provided for SL/HoD Resources: links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, YouTube, physical resources, power point; how they should be used. Consideration needs to be given to local availability Tutors should be expected to have a plan for the next lesson for student teachers</p>	<p>3.1. Read and discuss the appropriateness of the teaching and learning activities in the course manuals for the two course levels.</p> <p><i>Note: Tutors should go through the activities one after the other taking into consideration the coherency, methodology, time available, teaching and learning resources, and characteristics of learners as well as GESI related issues. E.g., Consider how to arrange the classroom and interact with the students to promote equal participation of all students. Plan in advance to ask substantive questions to all students. Etc.</i></p> <p>3.1.1. Identify and discuss areas that need clarification.</p> <p>3.2. Discuss how the varied activities would be carried out in both CoE and basic school classroom to achieve the LOs and the LIs of lesson 3 from your course manuals.</p> <p>Note: <i>Ensure that the language used in instructing learners to carry out the varied activities is gender responsive.</i></p> <p><i>E. g.1: Instead of “When everyone contributes <u>his</u> ideas, the discussion will be a success”.</i></p> <p><i>It may read: “When everyone contributes <u>his or her</u> ideas, the discussion will be a success”.</i></p> <p><i>2. Do not use harsh, threatening language or actions that instil fear in both females and males.</i></p> <p>3.3. Model the teaching of the concept of electricity.</p>	<p>40 mins</p>
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	<p>3.4. Discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed.</p> <p><i>E.g.</i></p> <p><i>(i). Prepare and use TLRs that attract the attention and interest of both female and male students, such as short video on science concept to be learned.</i></p> <p><i>(ii). Attract the interest of both female and male students, motivate them and provide relevance to the lesson learned.</i></p> <p>3.5. Explain how you would assist the student teachers to demonstrate the 21st century skill in the basic school classroom.</p> <p>3.6. Read the assessment activities in the various course manuals and identify areas that require clarification.</p> <p>3.7. Identify the inclusive resources needed for teaching and learning of the concepts in both CoE and basic school classrooms.</p> <p><i>E.g., E.g., COKO Games- https://www.cokogames.com/ohm-simulation-interactive-ohms-law), Audio-visuals from YouTube in relation to teaching electricity and potential difference as well as calculations involving ohm's law concept.</i></p> <p>Note:</p> <p><i>(i). Make sure the resources are enough and appropriate to all learners (females, males and persons with SEN)</i></p>	
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<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ➤ Tutors should Identifying critical friends to observe lessons and report at next session ➤ Identifying and addressing any outstanding issues relating to the lesson/s for clarification 	<p>4.1. Provide feedback on this PD session taking into consideration – Clarity of concepts, pedagogical approaches employed, ICT integration, GESI, Twenty First Century Skills (NTS 1a, 3i,) and make notes that will help you to teach Lesson 3.</p> <p>4.2. Identify a critical friend who took part in the PD session on lesson 3 to sit in your class during lesson to provide feedback and report on observations made in the next PD session.</p> <p>4.3. Discuss anything relating to Lesson 3 that needs clarification.</p>	<p>15 mins</p>
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Tutor PD Session		
<p>Age Levels/s: Course Titles: Physics - Properties of Matter and Electromagnetism. Chemistry - <i>Chemistry Around Us</i></p> <p>Lesson Title: Chemistry- Hydrogen ion Concentration (pH) in Systems. Physics- Electricity.</p>	<p>Name of Subject/s: Physics and Chemistry</p>	
<p>Year 4</p>	<p>Semester 2</p>	
Tutor PD Session for Lesson 4 in the Course Manual		
<p>Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.</p>	<p>Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.</p>	<p>Time in session</p>
<p>1 Introduction to the session</p> <ul style="list-style-type: none"> ➤ Review prior learning ➤ A critical friend to share findings for a short discussion and lessons learned ➤ Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators ➤ Overview of content and identification of any distinctive aspects of the lesson/s, <p>NB The guidance for SL/HoD should identify, address and <i>provide explanations</i> for any areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p>1.1 Discuss the successes and challenges of the PD session for lesson 3.</p> <p>1.2. Share your observations with the larger group as critical friends who sat in different lessons during the actual teaching of lesson 3.</p> <p>1.3. Read the introduction, lesson description and the purpose of lesson 4 in the course manual and indicate how they are related to student teachers' relevant previous knowledge.</p> <p>Note <i>Topics and brief lesson descriptions for lesson 4 are:</i> Physics - <i>In this lesson, Tutor discusses Electricity with student teachers. The following topics will be introduced to student teachers under electricity; identification of cell (chargeable and non-chargeable) and electric power. In this lesson student teachers will</i></p>	<p>20 mins</p>

	<p>overcome their misconceptions in identification of cell (chargeable and non-chargeable) and Electric power, and basically learn how to teach these topics to the basic school learner.</p> <p>Chemistry- The lesson is designed to further improve student teachers conceptual understanding of chemicals (Acids and Alkalis or bases) and to guide student teachers to be able to present this in practical ways for the JHS learner. The following topics will be introduced to student teachers: Concept of buffer, Buffers and their applications.</p> <p>1.4. Read, identify and discuss the LOs and LIs of lesson 4 in the course manuals.</p> <p><u>Chemistry:</u> <u>L.O</u> <i>Demonstrate knowledge and skills in identifying buffers in systems (NTS 2c, p.13) Demonstrate the ability to explain the concepts of pH to JHS learners.</i> <u>LI</u> <i>Prepare a checklist of buffers. Demonstrate an understanding of buffers by explaining to peers.</i></p> <p><u>Physics:</u> <u>LO</u> <i>Draw simple electrical circuits, solve basic problems in electricity and state the importance of electricity and magnetism. (NTS 1a &1b, 2a &2c, Pg. 18 & 20).</i></p> <p>1.5. Explain how the course learning outcomes and their corresponding indicators are related to student teachers' relevant previous knowledge.</p> <p><u>LI</u> <i>Provide a chart showing the drawings of simple electrical circuits, some basic</i></p>	
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	<p><i>solutions in electricity, list the importance of electricity and magnetism and gadgets that Hands-on Practical activities on identification of cells (chargeable and non-chargeable) and calculations in electric power, and sharing ideas in class. Student teachers use electromagnetic properties</i></p> <p>1.6. Identify and explain the distinctive features of lesson 4 for the two courses.</p> <p>Note: Examples of distinctive features of electricity are: <i>Cells (chargeable and non-chargeable) and calculations on electric power.</i></p> <p>Examples of distinctive features of Buffer are: <i>Buffers in biological system – food and blood, pH, acids, and bases.</i></p>	
<p>As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.</p>	<p>1.1. Describe how you will assist student teachers to discuss the effects of the interventions of their Classroom Enquiry and Action Research on learners. <i>Refer to STS Handbook pg. 91-100.</i></p>	
<p><i>For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.</i></p>	<p>1.8. Discuss how you will help the student teachers to integrate ICT tools and GESI issues in their lessons when posted. <i>E.g., Using Microsoft Excel and Word processor to plan lessons and design inclusive TLRs.</i></p>	
<p>2 Concept Development (New learning likely to arise in lesson/s):</p> <p>➤ Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or</p>	<p>2.1. Use thinks pair share to identify and explain the main concepts of Lesson 4 from the course manuals. <i>Examples of main concept/ new learning of lesson 4 are:</i> Physics-<i>Drawing of simple electrical circuits, the skill of solving basic problems in electricity.</i></p>	<p>15 mins</p>

<p>pedagogy being introduced in the lesson, which need to be explored with the SL/HoD</p> <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.</p>	<p>Chemistry-<i>buffers in biological system</i></p> <p>2.2. Identify and discuss any GESI issues related to the new concepts of Lesson 4 from the course manuals.</p> <p><i>E.g., Concepts must reflect the diversity of ALL learners and should not reinforce false gender assumptions or stereotypes.</i></p> <p>2.3. In mixed-gender groups, (where applicable), discuss and share potential barriers to the teaching and learning of the new concepts of Lesson 4.</p> <p>A potential barrier (Physics)- <i>Have the misconception on chargeable and non-chargeable cells, thus, all electrical cells are chargeable.</i></p> <p>Suggested solution to the potential barrier- <i>Ask learners to read on Electrical Cell before the start of the lesson.</i></p> <p>2.4. Discuss the appropriateness of the teaching strategies suggested in the course manuals for teach lesson 4 and suggest alternative ones if possible.</p> <p>Example of Teaching Strategies from the course manuals: <i>Using simulations and multimedia presentations, demonstration, group work and discussion.</i></p>	
<p>3.Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> ➤ Reading and discussion of the teaching and learning activities ➤ Noting, addressing, and explaining areas where tutors may require clarification ➤ Noting opportunities for making <i>explicit links</i> to the 	<p>3.1. Discuss through questions and answers the various suggested teaching and learning activities from the course manuals to be used in delivery lesson 4.</p> <p>NB: <i>Carefully review with your colleagues the language used in the activities of the course manual to make them gender responsive and inclusive if appropriate.</i></p>	40 mins

<p>Basic School Curriculum</p> <ul style="list-style-type: none"> ➤ Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills ➤ Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning, subject specific examples should be provided for SL/HoD ➤ Resources: links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, YouTube, physical resources, power point; how they should be used. Consideration needs to be given to local availability ➤ Tutors should be expected to have a plan for the next lesson for student teachers 	<p>3.2. Discuss in your groups how GESI responsiveness, ICT and 21st Century skills will help to promote the delivery of the lessons in both the B.Ed. and Basic School Curricula.</p> <p>Examples of 21st century skills from the course manual and other sources: <i>Ccommunication skills, collaboration, observation and enquiry skills, digital literacy, creativity, personal development and global citizenship.</i></p> <p>Examples of GESI responsiveness from the course manual and other sources: <i>Making reasonable adjustments for physically challenged learners. Both male and female learners playing leading roles in a group task. The use of braille and audio machines.</i></p> <p>Examples of ICT tools from the course manual and other sources: <i>Office 365 vs G-suite for education, Google meet for online teaching, Google classroom for online assignment submissions, plagiarism checking software, tools for checking grammar errors online.</i></p> <p>3.3. Read the assessment section in the course manuals and discuss how they align with the NTEAP.</p> <p>3.3.1. Discuss how you will guide student teachers to do hands-on/ practical activities on identification of cells (chargeable and non-chargeable cells) and buffer solutions in inclusive classrooms and submit a typed report on them.</p> <p><i>Note: (This report could be used as their subject project).</i></p>	
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	<p><i>Student teachers, in pairs, (male and females as appropriate) should also provide charts on current electricity just after the lesson.</i></p> <p><i>(This report could be used as part of their subject portfolio).</i></p> <p>3.4. Projector or watch a video, as appropriate, on different types of cells (chargeable and non-chargeable) and buffer solutions in their groups and discuss how this concept will be presented to the student teachers.</p> <p>(i) Electric Power - YouTube (ii) Respiratory Buffer System - YouTube</p> <p>NB: <i>Let everybody have a concrete plan for teaching the given topics, thus, the activities agreed on by the group to be followed.</i></p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ➤ <i>Tutors should Identifying critical friends to observe lessons and report at next session</i> ➤ <i>Identifying and addressing any outstanding issues relating to the lesson/s for clarification</i> 	<p>4.1. Identify a critical friend who took part in the PD session to sit in your class during lesson to provide feedback to you and report on observations made in the next PD session.</p> <p>4.2. Discuss in your groups anything relating to Lesson 4 that needs clarification.</p> <p><i>Note:</i> (i). <i>In the case of unresolved issues consult the subject writing leads.</i> (ii). <i>Read lesson 5 from the PD manual and find relevant materials for the next session.</i></p>	<p>15 mins</p>

Tutor PD Session		
Age Levels/s: Course Titles: Physics - Properties of Matter and Electromagnetism. Chemistry - <i>Chemistry Around Us</i> Lesson Title: Chemistry- Electrolytes and non-electrolytes. Physics: Magnet and Electromagnet	Name of Subject/s: Physics and Chemistry	
Year 4	Semester 2	
Tutor PD Session for Lesson 5 in the Course Manual		
Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1 Introduction to the session <ul style="list-style-type: none"> ➤ Review prior learning ➤ A critical friend to share findings for a short discussion and lessons learned ➤ Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators ➤ Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should identify, address and <i>provide explanations</i> for any areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session	1.1, Discuss the successes and challenges of the PD session for lesson 4. 1.2. In your groups, invite your critical friends to share their observations made during delivery of lesson 4 and discuss the suggestions provided. 1.3. Read the introduction, lesson description and the purpose of lesson 5 in the course manual and indicate how they are related to student teachers' relevant previous knowledge. Note <i>Topics and brief lesson descriptions for lesson 4 are:</i> Physics - <i>The main topic for this lesson is Magnet and Electromagnet. In this lesson, Tutor discusses properties of a magnet and magnetic field with student teachers. Again, student teachers will be guided to overcome their misconceptions in properties of magnets and magnetic field, and basically learn how to teach these topics to the basic school learner.</i>	20 mins

	<p>Chemistry- <i>The lesson is designed to further improve student teachers' knowledge and understanding on electrolytes and non-electrolytes and to guide them to be able to teach same concepts for the JHS learner.</i></p> <p>1.4. Read, identify and discuss the <i>LOs and LIs</i> of lesson 5 in the course manuals.</p> <p>Chemistry: <u>L.O</u> <i>Explain the use for electrolytes and non-electrolytes (NTS 2c, p. 13, 3i, 3i, p.14).</i></p> <p>LI <i>Prepare model experimental set-up to show the use of electrolyte in electrical conductivity.</i></p> <p>Physics: <u>LO</u> <i>Demonstrate understanding of magnets and electromagnetics (NTS 1b, 3a, 3e & 3j).</i></p> <p>LI <i>(i). Draw magnetic field lines. (ii) Show the relationship between electric and magnetic field lines.</i></p> <p>1.5. Explain how the course learning outcomes and their corresponding indicators are related to student teachers' relevant previous knowledge.</p> <p>1.6. Identify and explain the distinctive features of lesson 5 for the two courses.</p> <p>Note: Examples of distinctive features of lesson 5 are: Electric field- <i>an electric property associated with each point in space when charge is present in any form.</i></p>	
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	<p>Magnetic field-is a vector field that describes the magnetic influence on moving electric charges, electric current, and magnetic materials.</p> <p>Magnetic field lines- are a visual tool used to represent magnetic fields.</p> <p>Electrolytes- a liquid or gel which contains ions e.g., K^+, Na^+, Cl^- ions in solution.</p>	
<p>As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.</p>	<p>1.1. Describe how you will assist student teachers to discuss the effects of the interventions of their Classroom Enquiry and Action Research on learners.</p> <p><i>Refer to STS Handbook pg. 91-100.</i></p>	
<p><i>For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.</i></p>	<p>1.7. Discuss how you will help the student teachers to integrate Cross-cutting Issues and GESI issues in their lessons when posted.</p> <p><i>E.g., Using mobile phones to show image, power points and videos to enhance learning.</i></p> <p><i>Lesson plans should make allowance for all students to participate in the learning activity. When doing science experiments, ensure that girls, boys, and students with disability have a chance to use the equipment and chemicals.</i></p>	
<p>2 Concept Development (New learning likely to arise in lesson/s):</p> <p>➤ Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD</p>	<p>2.1. Identify and explain the main concepts of Lesson 5 from the course manuals.</p> <p><i>Examples of main concept/ new learning of lesson 5 are:</i></p> <p>Physics- Properties of magnets and magnetic field.</p> <p>Chemistry- Electrolytes and Nonelectrolytes.</p>	15 mins

<p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.</p>	<p>2.2. Discuss alternative strategies to be employed to teach the new concepts.</p> <p><i>E.g., Using audio visual materials to teach the concepts.</i></p> <p>2.3. Identify and discuss any GESI issues related to the new concepts of Lesson 5 from the course manuals.</p> <p><i>E.g., Equity and SEN: through appropriate gender and equity sensitive group work to protect vulnerable student teachers, establish an interactive and inclusive classroom atmosphere.</i></p> <p>2.4. In mixed-gender groups, (where applicable), discuss and share potential barriers to the teaching and learning of the new concepts of Lesson 5.</p>	
<p>3.Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> ➤ Reading and discussion of the teaching and learning activities ➤ Noting, addressing, and explaining areas where tutors may require clarification ➤ Noting opportunities for making <i>explicit links</i> to the Basic School Curriculum ➤ Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills ➤ Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning, subject specific examples should be provided for SL/HoD 	<p>3.1. Read and discuss the various teaching and learning activities suggested in the course manuals to be used to achieve the LOs and LIs of lesson 5.</p> <p>3.2. Discuss in your groups how GESI responsiveness, ICT and 21st Century skills will help to promote the delivery of the lessons in both the B.Ed. and Basic School Curricula.</p> <p><i>Examples of 21st century skills from the course manual and other sources: Digital literacy, Ccommunication skills, collaboration, observation and enquiry skills, digital literacy, creativity, personal development and global citizenship.</i></p> <p><i>Examples of GESI responsiveness from the course manual and other sources: Both male and female learners playing leading roles in a group task.</i></p> <p><i>Examples of ICT tools from the course manual and other sources:</i></p>	<p>40 mins</p>

<ul style="list-style-type: none"> ➤ Resources: links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, YouTube, physical resources, power point; how they should be used. Consideration needs to be given to local availability ➤ Tutors should be expected to have a plan for the next lesson for student teachers 	<p><i>Office 365, Google classroom for online assignment submissions, plagiarism checking software, tools for checking grammar errors online.</i></p> <p>3.3. Read the assessment section in the course manuals and discuss how they align with the NTEAP.</p> <p>3.3.1. Discuss how you will guide student teachers to do hands-on/practical activities on establishing the properties of magnet in an inclusive, multi-grade and developmentally appropriate classroom and submit a typed report on them.</p> <p><i>Note: (This report could be used as their subject project).</i></p> <p><i>Student teachers, in pairs, (male and females as appropriate) should also provide a 30 min. lesson plan on how to teach the concept of electrolytes and non-electrolytes to JHS 3 learners.</i></p> <p><i>(This report could be used as part of their subject portfolio).</i></p> <p>3.4. Project or watch a video, as appropriate, on electrolytes and non-electrolytes in their groups and discuss how this concept will be presented to the student teachers. What Are Electrolytes? - YouTube</p> <p>NB: <i>Let everybody have a concrete plan for teaching the given topics, thus, the activities agreed on by the group to be followed.</i></p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ➤ <i>Tutors should Identifying critical friends to observe lessons and report at next session</i> 	<p>4.1. Identify a critical friend who took part in the PD session to sit in your class during lesson to provide feedback to you and report on observations made in the next PD session.</p>	<p>15 mins</p>

<p>➤ <i>Identifying and addressing any outstanding issues relating to the lesson/s for clarification</i></p>	<p>4.2. Discuss in your groups anything relating to Lesson 5 that needs clarification.</p> <p><i>Note:</i> <i>(i). In the case of unresolved issues consult the subject writing leads.</i> <i>(ii). Read lesson 6 from the PD manual and find relevant materials for the next session.</i></p>	
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Tutor PD Session		
Year 4	Semester 2	
Age Levels/s: Course Titles: Physics - Properties of Matter and Electromagnetism. Chemistry - <i>Chemistry Around Us</i> Lesson Title: Chemistry- Course Review 1 with STS seminar Physics: Course Review 1 with STS seminar	Name of Subject/s: Physics and Chemistry	
Tutor PD Session for Lesson 6 in the Course Manual		
Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1 Introduction to the session ➤ Review prior learning ➤ A critical friend to share findings for a short discussion and lessons learned ➤ Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators ➤ Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should identify, address and <i>provide explanations</i> for any areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session	1.1 Tell how useful the previous lessons of the PD session were and how it influenced your teaching positively, challenges and if possible subject way to improve upon the next PD session lessons. 1.2 A critical friend gives feedback on observation during enactment of the lessons and what they have learnt. 1.3 Think-pair-share to present the introductory section of the lesson 1 -5 up to and including the learning outcomes (LOs) in phase groups. 1.4 Explain how the course learning outcomes and their corresponding indicators are related to student teachers' relevant previous knowledge in lessons 1-5 and state their expectations of the PD Session.	20 mins
As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio	1.5. Review the various post internship seminar activities of lessons 1,2,3,4 and 5 and share your	

<p>Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.</p>	<p>experiences with the whole group.</p>	
<p><i>For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.</i></p>	<p>1.6. Review the different GESI, CCI, and ICT issues raised in lessons 1,2,3,4, and 5, tell how those issues raised impacted positively in your previous lessons and what you need to do to improve upon incorporating GESI, CCI, and ICT features in your subsequent lessons.</p>	
<p>2 Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> ➤ Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.</p>	<p>2.1. Identify familiar and unfamiliar concepts in the lessons and discuss with the larger group.</p> <p>2.2. Outline possible challenging areas.</p> <p>2.3. Identify the most appropriate teaching strategies that can be employed to best deliver the new concepts in both CoE and basic school classroom to achieve the LOs and the LIs of the lesson.</p>	<p>15 mins</p>
<p>3.Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> ➤ Reading and discussion of the teaching and learning activities ➤ Noting, addressing, and explaining areas where tutors may require clarification ➤ Noting opportunities for making <i>explicit links</i> to the Basic School Curriculum ➤ Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills ➤ Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should 	<p>3.1 Suggest teaching and learning activities for the lessons taking into account GESI issues.</p> <p><i>E.g.</i></p> <ul style="list-style-type: none"> <i>i. Provision made for physically challenged</i> <i>ii. Both genders take leading roles in group tasks</i> <i>iii. Even distribution of questions to different categories of learners based on gender, ability, previous experience, etc.</i> <p>3.2 Identify and discuss areas that need clarification if any.</p> <p>3.3 Discuss how the different activities would be carried out in</p>	<p>40 mins</p>

<p>include at least two opportunities to use continuous assessment to support student teacher learning, subject specific examples should be provided for SL/HoD</p> <ul style="list-style-type: none"> ➤ Resources: links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, YouTube, physical resources, power point; how they should be used. Consideration needs to be given to local availability ➤ Tutors should be expected to have a plan for the next lesson for student teachers 	<p>both CoE and basic school classroom to achieve the LOs and the LIs of lesson 1-5 from their course manuals.</p> <p>3.4 Model a presentation of a concept using ICT tools and taking into consideration GESI issues and 21st Century skills (e.g. Both genders take the leading roles in their groups and in the demonstration of the use of ICT tools) to teach their lessons.</p> <p>3.5 Read and discuss the assessment activities in the various course manuals and identify areas that require clarification.</p> <p>3.6 Identify the inclusive resources needed for teaching and learning of the concepts in both CoE and basic school classrooms.</p> <p><i>E.g.</i> <i>Cardboards, Course manual, Flip charts, Poster paper, computers with internet access</i> https://www.ncbi.nlm.nih.gov/pmc/articles/PMC533116/ https://www.nap.edu/read/5287/chapter/3#13</p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ➤ Tutors should Identifying critical friends to observe lessons and report at next session <p>2. Identifying and addressing any outstanding issues relating to the lesson/s for clarification</p>	<p>4.1 Provide feedback of the PD session taking into consideration inclusivity – how to be patient with stammers, using tactile and audio devices for visually challenged, paying attention to all courses, etc.</p> <p>4.2 identify unresolved issues relating to this lesson for clarification</p> <p>4.3 a critical friend to observe your teaching and record his/her findings to be presented after delivery or in the Next PD session.</p>	<p>15 mins</p>

Tutor PD Session		
Age Levels/s: JHS (Chemistry): Water JHS (Physics): Magnet and Electromagnet	Name of Subject/s: Chemistry and Physics	
Year 4	Semester 2	
Tutor PD Session for Lesson 7 in the Course Manual		
Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
<p>1 Introduction to the session</p> <ul style="list-style-type: none"> ➤ Review prior learning ➤ A critical friend to share findings for a short discussion and lessons learned ➤ Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators ➤ Overview of content and identification of any distinctive aspects of the lesson/s, <p>NB The guidance for SL/HoD should identify, address and <i>provide explanations</i> for any areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement.</p> <p>NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p>1.1. Write things they learnt in lesson 7 PD sessions.</p> <p>1.2. Explain how you applied what you have written to the whole group</p> <p>1.3. Critical friends to share their findings for a short discussion</p> <p>1.4. Read and discuss the Introductory sections of the lesson up to learning indicators from their course manuals.</p> <p><i>LO: demonstrate skills in teaching Basic School Physics and in using Basic School Science Curriculum Materials for lessons planning and delivering. (NTS 1b, 3a, 3e & 3j)</i></p> <p><i>LI: Provide Lesson plan on teaching some concepts and show Video clip on teaching some topics in Basic School Physics.</i></p> <p>1.5. Explain how the course learning outcomes and their corresponding indicators are related to student teachers' relevant previous knowledge.</p>	20 mins

	1.6. Identify and discuss the distinctive features of lesson 8 for the two courses from the course manuals	
As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.	<p>1.1. Explain how they will organise post internship seminar for student teachers.</p> <p>1.2. List the artefacts of a professional teaching portfolio and show how they will help student teachers to develop their own professional teaching portfolio in their respective basic schools when posted. (Refer to Y3 STS Handbook Pg. 114-118).</p> <p>1.3. Explain how they would assist initial teachers to discuss some professional practices of their mentors and co-mentees. (Refer to NTS 1a, 3a, 3e and 3j Pg.14).</p>	
<i>For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.</i>	1.7. Identify the cross-cutting issues in the course manuals and explain how they can help the initial teachers to implement them in the basic school classroom after posting.	
<p>2 Concept Development (New learning likely to arise in lesson/s):</p> <p>➤ Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD</p> <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.</p>	<p>2.1. List and discuss the major concepts in lesson 7.</p> <p>2.2. Discuss the potential misconceptions and barriers with respect to the concepts listed.</p> <p>2.3. Identify the most appropriate teaching strategies that can be employed to best deliver the new concepts in both CoE and basic school classroom to achieve the LOs and the LIs of the lesson.</p>	15 mins

<p>3.Planning for teaching, learning and assessment activities for the lesson/s</p> <p>3.1 Reading and discussion of the teaching and learning activities</p> <p>3.2 Noting, addressing, and explaining areas where tutors may require clarification</p> <p>3.3 Noting opportunities for making <i>explicit links</i> to the Basic School Curriculum</p> <p>3.4 Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills</p> <p>3.5 Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning, subject specific examples should be provided for SL/HoD</p> <p>3.6 Resources: links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, YouTube, physical resources, power point; how they should be used. Consideration needs to be given to local availability</p> <p>3.7 Tutors should be expected to have a plan for the next lesson for student teachers</p>	<p>3.1. Read and discuss the teaching and learning activities in the course manuals for the two course levels</p> <p>3.1.1. Discuss areas that need clarification.</p> <p>3.2. Discuss how the different activities would be carried out in both CoE and basic school classroom to achieve the LOs and the LIs of lesson 8 from their course manuals</p> <p><i>Note:</i></p> <ul style="list-style-type: none"> ➤ <i>Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress. (NTS 3f)</i> ➤ <i>Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes. (NTS 3g)</i> <p>3.3. Discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed</p> <p>3.4. Guide tutors to explain how they would assist the student teachers to demonstrate the 21st century skill in the basic school classroom.</p> <p><i>E.g. (1) Digital Literacy e.g. The use of power-point to prepare and present lessons.</i></p> <p><i>(2) Development of leadership, collaborative and communicative skills through group works and presentations.</i></p> <p>3.5. Read the assessment activities in the various course manuals and</p>	<p>40 mins</p>
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	<p>identify areas that require clarification</p> <p>3.6. Identify the inclusive resources needed for teaching and learning of the concepts in both CoE and basic school classrooms</p> <p>Note: <i>(i). Make sure the resources are enough and appropriate to all learners (males, females and persons with SEN).</i> <i>(ii). Let everybody have a concrete plan for teaching the given topics, thus, the activities agreed on by the group to be followed.</i></p>	
<p>4. Evaluation and review of session:</p> <p>➤ Tutors should Identifying critical friends to observe lessons and report at next session Identifying and addressing any outstanding issues relating to the lesson/s for clarification</p>	<p>4.1. Identify a critical friend who took part in the PD session to sit in their class during lesson to provide feedback and report on observations made in the next PD session.</p> <p>4.2. Discuss anything relating to Lesson 7 that needs clarification. Note: <i>(i). In the case of unresolved issues consult the subject writing leads.</i> <i>(ii). Encourage tutors to read lesson 8 from the PD manual and find relevant materials for the next session.</i></p>	<p>15 mins</p>

Tutor PD Session		
Age Levels/s: JHS (Chemistry) JHS (Physics)	Name of Subject/s: Chemistry and Physics <i>Types of Climates and their effect on food</i> <i>Basic School Physics Curriculum Materials.</i>	
Year 4	Semester 2	
Tutor PD Session for Lesson 8 in the Course Manual		
Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
<p>1 Introduction to the session</p> <ul style="list-style-type: none"> ➤ Review prior learning ➤ A critical friend to share findings for a short discussion and lessons learned ➤ Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators ➤ Overview of content and identification of any distinctive aspects of the lesson/s, <p>NB The guidance for SL/HoD should identify, address and <i>provide explanations</i> for any areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement.</p> <p>NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p>1.1 Write 4 things they learnt in lesson 7 PD sessions.</p> <p>1.2 Explain how you applied what you have written to the whole group</p> <p>1.3 Critical friends to share their findings for a short discussion</p> <p>1.4 Read and discuss the introductory sections of the lesson up to learning indicators from their course manuals.</p> <p><i>LO: demonstrate skills in teaching Basic School Physics and in using Basic School Science Curriculum Materials for lessons planning and delivering. (NTS 1b, 3a, 3e & 3j)</i></p> <p><i>LI: Provide Lesson plan on teaching some concepts and show Video clip on teaching some topics in Basic School Physics.</i></p> <p>Explain how the course learning outcomes and their corresponding indicators are related to student teachers' relevant previous knowledge.</p>	20 mins

	1.1 Identify and discuss the distinctive features of lesson 8 for the two courses from the course manuals	
As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.	1.2 Explain how they will organise post internship seminar for student teachers 1.3 List the artefacts of a professional teaching portfolio and show how they will help student teachers to develop their own professional teaching portfolio in their respective basic schools when posted. (Refer to Y3 STS Handbook Pg. 114-118). 1.4 Explain how they would assist initial teachers to discuss some professional practices of their mentors and co-mentees. (Refer to NTS 1a, 3a, 3e and 3j Pg.14).	
<i>For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.</i>	1.10. Identify the cross-cutting issues in the course manuals and explain how they can help the initial teachers to implement them in the basic school classroom after posting.	
2 Concept Development (New learning likely to arise in lesson/s) : ➤ Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.	2.1 List and discuss the major concepts in lesson 8. 2.2 Discuss the potential misconceptions and barriers with respect to the concepts listed. 2.3 Identify the most appropriate teaching strategies that can be employed to best deliver the new concepts in both CoE and basic school classroom to achieve the LOs and the LIs of the lesson.	15 mins

<p>3.Planning for teaching, learning and assessment activities for the lesson/s</p> <p>Reading and discussion of the teaching and learning activities</p> <p>Noting, addressing, and explaining areas where tutors may require clarification</p> <p>Noting opportunities for making <i>explicit links</i> to the Basic School Curriculum</p> <p>Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills</p> <p>Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning, subject specific examples should be provided for SL/HoD</p> <p>Resources: links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, YouTube, physical resources, power point; how they should be used. Consideration needs to be given to local availability</p>	<p>3.1 Read and discuss the teaching and learning activities in the course manuals for the two course levels</p> <p>3.2 Discuss areas that need clarification.</p> <p>3.3 Discuss how the different activities would be carried out in both CoE and basic school classroom to achieve the LOs and the LIs of lesson 8 from their course manuals</p> <p><i>Note:</i></p> <ul style="list-style-type: none"> ➤ <i>Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress. (NTS 3f)</i> ➤ <i>Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes. (NTS 3g)</i> <p>3.1 Discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed</p> <p>3.2 Explain how you would assist the student teachers to demonstrate the 21st century skill in the basic school classroom.</p> <p><i>E.g. (1) Digital Literacy e.g. The use of power-point to prepare and present lessons.</i></p> <p><i>(2) Development of leadership, collaborative and communicative skills through group works and presentations.</i></p> <p>3.3 Read the assessment activities in the various course manuals and identify areas that require clarification</p>	<p>40 mins</p>
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	<p>3.4 Identify the needed inclusive resources for teaching and learning of the concepts in both CoE and basic school classrooms</p> <p>Note: <i>(i). Make sure the resources are enough and appropriate to all learners (males, females and persons with SEN).</i> <i>(ii). Let everybody have a concrete plan for teaching the given topics, thus, the activities agreed on by the group to be followed</i></p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ➤ Tutors should Identifying critical friends to observe lessons and report at next session ➤ Identifying and addressing any outstanding issues relating to the lesson/s for clarification 	<p>4.1. Identify a critical friend who took part in the PD session to sit in their class during lesson to provide feedback and report on observations made in the next PD session.</p> <p>4.2. Discuss with tutors anything relating to Lesson 8 that needs clarification.</p> <p>Note: <i>(i). In the case of unresolved issues consult the subject writing leads.</i> <i>(ii). Encourage tutors to read lesson 9 from the PD manual and find relevant materials for the next session.</i></p>	<p>15 mins</p>

Tutor PD Session		
Age Levels/s: JHS	Name of Subject/s: JHS (<i>PHYSICS</i>): Basic School Physics Curriculum Materials JHS (<i>CHEMISTRY</i>): Climatic effects on nutrition in foods	
Year 4	Semester 2	
Tutor PD Session for Lesson 9 in the Course Manual		
Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
<p>1 Introduction to the session</p> <ul style="list-style-type: none"> ➤ Review prior learning ➤ A critical friend to share findings for a short discussion and lessons learned ➤ Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators ➤ Overview of content and identification of any distinctive aspects of the lesson/s, <p>NB The guidance for SL/HoD should identify, address and <i>provide explanations</i> for any areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement.</p> <p>NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p>1.1. In your distinctive groups write two things that didn't go on well in lesson 8 of the previous PD session on a post in card and tell how it affected the session.</p> <p>1.2. A critical friend to give feedback on his/ her observation of the previous enacted lesson laying emphasis on clarity of content, assessment strategies, ICT integration, GESI, 21st Century.</p> <p>1.3. Read individually and discuss in pairs the introductory sections of the lesson up to and including Learning Outcomes indicators in the course manual and indicate how they are related to student teachers' relevant previous knowledge.</p> <p>Physics- Lesson title - Climatic effects on nutrition in foods</p> <p><i>Lesson description:</i></p> <p><i>This lesson looks at the relationship between climate, availability of nutrients and food production.</i></p> <p>Chemistry-Lesson title - Basic School Physics Curriculum Materials</p>	20 mins

	<p><i>Lesson description:</i></p> <p><i>The main topic for this lesson is basic school physics curriculum materials. Under this topic Tutor discusses the rational, general aims, objectives, and organisation of the syllabus (Profile Dimension) with student teachers. Student teachers will be guided on how to develop rational, general aims, objectives, and organisation of the syllabus (Profile Dimension)</i></p> <p>1.1. Read and discuss the Overview of content and identification of any distinctive aspects of lesson 9 in the course manual.</p> <p><i>E.g., PHYSICS – LO Demonstrate skills in teaching Basic School Physics and in using Basic School Science Curriculum Materials for lesson planning and delivery. (NTS 1b, 3a, 3e & 3j)</i></p> <p><i>LI</i></p> <p><i>Provide Lesson plan on teaching some concepts and show Video clip on teaching some topics in Basic School Physics.</i></p> <p>CHEMISTRY:</p> <p>LO</p> <p><i>Demonstrate understanding of the effect of climatic change on nature of the soil for plant crops and nutritive value of produced crops for farm animals and farmed fish.</i></p> <p><i>LI</i></p> <p><i>Report in diverse forms</i></p> <p>1.2. Identify and discuss the distinctive features of lesson 9 form your various levels.</p>	
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	<p><i>Distinctive features</i></p> <p>JHS: PHYSCIS</p> <ul style="list-style-type: none"> ➤ Rational, general aims, objectives, and organisation of the syllabus (Profile Dimension) <p>JHS: CHEMISTRY</p> <ul style="list-style-type: none"> ➤ Climate ➤ availability of nutrients ➤ food production 	
<p>As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.</p>	<p>1.6 Describe how you will assist student teachers to discuss the effects of the interventions of their Classroom Enquiry and Action Research on learners. <i>Refer to STS Handbook pg. 91-100</i></p>	
<p><i>For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.</i></p>	<p>1.7 Answer questions on how you can facilitate student teachers to incorporate 21st century ICT, cross-cutting and GESI issue in daily STS lesson.</p> <p><i>e.g – How to use computer or mobile phone to search for information on the internet.</i></p>	
<p>2 Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> ➤ Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.</p>	<p>2.1 identify and explain the main concepts of Lesson 9 from the course manuals</p> <p>Physics- <i>Climatic effects on nutrition in foods</i></p> <p>Chemistry- - Basic School Physics Curriculum Materials</p> <p>2.2 Outline and discuss possible potential barriers areas in teaching the various concept listed.</p> <p>JHS: (chemistry)-<i>Learners sometimes think that poor climatic conditions and subsequent famines are punishments from gods or evil deeds by community members</i></p>	15 mins

	<p><i>JHS: (Physics)</i> <i>Student teachers may lack the skills of developing rational, general aims, objectives, and organisation of the syllabus (Profile Dimension)</i></p> <p>2.3 In pairs identify and discuss the needed pedagogy to be used in the lesson 9 to deliver the new concepts in both CoE and basic school classroom to achieve the LOs and the LIs of the lesson.</p> <p>2.4 identify and discuss how GESI issues can be integrated in the teaching of the new concepts of Lesson 9 from the course manuals. <i>Note: refer to GESI session 0 for examples.</i></p>	
<p>3.Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> ➤ Reading and discussion of the teaching and learning activities ➤ Noting, addressing, and explaining areas where tutors may require clarification ➤ Noting opportunities for making <i>explicit links</i> to the Basic School Curriculum ➤ Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills ➤ Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning, subject specific examples should be provided for SL/HoD ➤ Resources: links to the 	<p>3.1 Read through the teaching and learning activities of Lesson 9 from the course manual and suggest other teaching and learning activities for teaching the various courses.</p> <p>3.2 Identify areas that need clarification and how to address it in the lesson.</p> <p>3.3 In your various groups/levels discuss how the different activities would be carried out in both CoE and basic school classroom to achieve the LOs and the LIs of the course manual for lesson 9.</p> <p>3.4 Discuss how GESI issues related to the teaching and learning activities of lesson 9 would be addressed.</p> <p>3.5 Identify two 21st century skills that can be developed in the learners and assist the student teachers to demonstrate it in the basic school classroom.</p> <p>3.6 Read, identify and discuss the continuous assessment opportunities in the lesson 9.</p>	40 mins

<p>existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, YouTube, physical resources, power point; how they should be used. Consideration needs to be given to local availability</p> <ul style="list-style-type: none"> ➤ Tutors should be expected to have a plan for the next lesson for student teachers 		
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ➤ Tutors should Identifying critical friends to observe lessons and report at next session <p>Identifying and addressing any outstanding issues relating to the lesson/s for clarification</p>	<p>4.1 Identify a critical friend from the same or related discipline to observe the enactment of their lesson and provide feedback during the next PD Session (NTS 1a).</p> <p>4.2 Identify unresolved issues relating to this lesson 9 for clarification</p> <p>4.3. Read through lesson 10 before the next PD.</p>	<p>15 mins</p>

Tutor PD Session		
Age Levels/s: JHS (Physics) JHS (Chemistry)	Name of Subject/s: <i>Skills in teaching Basic school Physics</i> <i>Further studies on the Secondary School Chemistry Curriculum</i>	
Year 4	Semester 2	
Tutor PD Session for Lesson 10 in the Course Manual		
Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
<p>1 Introduction to the session</p> <ul style="list-style-type: none"> ➤ Review prior learning ➤ A critical friend to share findings for a short discussion and lessons learned ➤ Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators ➤ Overview of content and identification of any distinctive aspects of the lesson/s, <p>NB The guidance for SL/HoD should identify, address and <i>provide explanations</i> for any areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement.</p> <p>NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p>1.1. Write things they learnt in lesson 9 PD sessions.</p> <p>1.2. Explain how you applied what you have written to the whole group</p> <p>1.3. Critical friends to share their findings for a short discussion</p> <p>1.4. Read and discuss the Introductory sections of the lesson up to learning indicators from their course manuals.</p> <p><i>LO: demonstrate skills in teaching Basic School Physics and in using Basic School Science Curriculum Materials for lessons planning and delivering. (NTS 1b, 3a, 3e & 3j)</i></p> <p><i>LI: Provide Lesson plan on teaching some concepts and show Video clip on teaching some topics in Basic School Physics.</i></p> <p>1.1.Explain how the course learning outcomes and their corresponding indicators are related to student teachers' relevant previous knowledge.</p>	20 mins

	1.2. Identify and discuss the distinctive features of lesson 10 for the two courses from the course manuals	
<p>As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.</p>	<p>1.1. Explain how you would assist initial teachers to discuss some professional practices of their mentors and co-mentees from the NTS.</p> <p><i>Refer to NTS:</i></p> <p>Professional Values and Attitudes 1(a) <i>critically and collectively reflects to improve teaching and learning.</i></p> <p>Professional Knowledge 2(c) <i>Has secure content knowledge, pedagogical knowledge and pedagogical content knowledge for the school and grade they teach in.</i> 2(f) <i>Takes accounts of and respects learners’ cultural, linguistic, socio-economic and educational backgrounds in planning and teaching.</i></p> <p>Professional Practice 3(a) <i>Plans and delivers varied and challenging lessons, showing a clear grasp of the intended outcomes of their teaching.</i> 3(c) <i>Creates a safe, encouraging learning environment.</i> 3 (d) <i>Manages behaviour and learning with small and large classes.</i> 3(g) <i>Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes.</i></p>	
<p>For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.</p>	<p>1.3. Identify the cross-cutting issues in the course manuals and explain how they can help the initial teachers to implement them in the basic school classroom after posting.</p> <p><i>Examples of cross-cutting issues are:</i></p> <ul style="list-style-type: none"> ➤ <i>The use of ICT</i> ➤ <i>Equity</i> ➤ <i>Inclusivity</i> <p><i>Gender issues</i></p>	

<p>2 Concept Development (New learning likely to arise in lesson/s):</p> <p>➤ Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD</p> <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.</p>	<p>2.1. List and discuss the major concepts in lesson 10.</p> <p>2.2. Discuss the potential misconceptions and barriers in the course manual with respect to the concepts.</p> <p>2.3. Identify the most appropriate teaching strategies that can be employed to best deliver the new concepts in both CoE and basic school classroom to achieve the LOs and the LIs of the lesson.</p>	<p>15 mins</p>
<p>3.Planning for teaching, learning and assessment activities for the lesson/s</p> <p>Reading and discussion of the teaching and learning activities</p> <p>Noting, addressing, and explaining areas where tutors may require clarification</p> <p>Noting opportunities for making <i>explicit links</i> to the Basic School Curriculum</p> <p>Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills</p> <p>Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning, subject specific examples should be provided for SL/HoD</p> <p>Resources: links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, YouTube, physical resources, power point; how they should be used.</p> <p>Consideration needs to be given to local availability</p>	<p>.1. Read and discuss the teaching and learning activities in the course manuals for the two course levels</p> <p>.2. Discuss areas that need clarification.</p> <p>.3. Discuss how the different activities would be carried out in both CoE and basic school classroom to achieve the LOs and the LIs of lesson 10 from their course manuals</p> <p>Note:</p> <p>➤ <i>Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress. (NTS 3f)</i></p> <p>➤ <i>Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes. (NTS 3g)</i></p> <p>.4. Discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed</p> <p>.5. Guide tutors to explain how they would assist the student teachers to demonstrate the 21st century skill in the basic school classroom.</p> <p><i>E.g. (1) Digital Literacy e.g. The use of</i></p>	<p>40 mins</p>

<p>Tutors should be expected to have a plan for the next lesson for student teachers</p>	<p><i>power-point to prepare and present lessons.</i> <i>(2) Development of leadership, collaborative and communicative skills through group works and presentations.</i></p> <p>.6. Read the assessment activities in the various course manuals and identify areas that require clarification</p> <p>.7. Identify the needed inclusive resources for teaching and learning of the concepts in both CoE and basic school classrooms</p> <p>Note: <i>(i). Make sure the resources are enough and appropriate to all learners (males, females and persons with SEN).</i> <i>(ii). Let everybody have a concrete plan for teaching the given topics, thus, the activities agreed on by the group to be followed.</i></p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ➤ Tutors should Identifying critical friends to observe lessons and report at next session ➤ Identifying and addressing any outstanding issues relating to the lesson/s for clarification 	<p>4.1. Identify a critical friend who took part in the PD session to sit in their class during lesson to provide feedback and report on observations made in the next PD session.</p> <p>4.2. Discuss with tutors anything relating to Lesson 10 that needs clarification. Note: <i>(i). In the case of unresolved issues consult the subject writing leads.</i> <i>(ii). Encourage tutors to read lesson 11 from the PD manual and find relevant materials for the next session.</i></p>	<p>15 mins</p>

Tutor PD Session		
Age Levels/s: JHS <i>Course Title/s: Physics- Properties of Matter and Electromagnetism Chemistry: Chemistry Around Us Lesson Title: Physics- Skills in Teaching Basic School Physics Chemistry: Co-planning, Co-teaching and Co-assessment</i>	Name of Subject/s: Physics & Chemistry	
Year 4	Semester 2	
Tutor PD Session for Lesson 11 in the Course Manual		
Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1 Introduction to the session Review prior learning A critical friend to share findings for a short discussion and lessons learned Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators ➤ Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should identify, address and provide explanations for any areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support	1.1. Identify two things you learned during the previous PD session and tell how they affected your lessons positively. 1.2. Invite your critical friends to share their observations made during lesson delivery and discuss the suggestions provided. 1.3. Read and discuss the introductory sections of the lesson up to course learning outcomes and indicators from your course manuals. Note (1): <i>The topics and lesson introduction/descriptions for lesson 11 at the various course levels are: JHS (Physics) Topic: Skills in teaching Basic school Physics Lesson Description - The lesson is a furtherance to lesson 10 and must help students to understand that Physics gets</i>	20 mins

<p>tutor engagement. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p><i>involved in their daily life right from waking up in the morning</i></p> <p>JHS (Chemistry) Topic: <i>Co- planning, co-teaching and co-assessment</i></p> <p>Lesson Description – <i>This lesson deals with interpreting, planning, executing and assessing lessons taught in reflective mode.</i></p> <p><i>E.g., 2. Physics CLOs: Demonstrate skills in teaching Basic School Physics and in using Basic School Science Curriculum Materials for lessons planning and delivering. (NTS 1b, 3a, 3e & 3j)</i></p> <p><i>Physics CLIs: Provide Lesson plan on teaching some concepts and show Video clip on teaching some topics in Basic School Physics.</i></p> <p><i>E.g., 3. Chemistry CLOs: Demonstrate understanding of curriculum, required pedagogies and assessment procedures. Understand how learning occurs in diverse contexts and apply this in their execution of co-planned and co-taught lesson</i></p> <p><i>Chemistry CLIs: In pairs co-plan, co-teach, co-assess and co-reflect prepared 30-minute lesson from week 10.</i></p> <p>1.3.1. Explain how the course learning outcomes and their corresponding indicators are related to student teachers’ relevant previous knowledge.</p> <p>1.4. Identify and discuss the distinctive features of lesson 11 for the two courses from the course manuals.</p> <p>NOTE Distinctive Features JHS (Physics):</p> <ul style="list-style-type: none"> ➤ <i>Planning and designing experiments</i> ➤ <i>Communicating and reporting</i> ➤ <i>Discussions on experimental</i> 	
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<p>As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.</p>	<p>1.5. Discuss how you will assist student teachers during the post internship seminars to practice the qualities of a professional teacher when posted.</p> <p><i>Some Qualities of a Professional Teacher are:</i></p> <ul style="list-style-type: none"> ➤ <i>Good teachers are strong communicators</i> ➤ <i>Good teachers listen well.</i> ➤ <i>Good teachers focus on collaboration</i> ➤ <i>Good teachers are adaptable.</i> ➤ <i>Good teachers are engaging.</i> ➤ <i>Good teachers show empathy</i> ➤ <i>Good teachers have patience.</i> ➤ <i>Professional teachers Value real-world learning.</i> ➤ <i>Professional teachers share best practices</i> ➤ <i>Professional teachers are life-long learners.</i> <p>1.6. Explain the classifications of the Newly Qualified Teachers (NQTs) roles and responsibilities in the portfolio assessment process and how you will discuss the classifications with the extending teachers during the post internship seminar.</p> <p>1.7. Discuss the Sample Portfolio Elements that would be used both by district and regional assessors and how you will share these sample portfolio elements with the student teachers during the post internship seminar.</p>	
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<p><i>For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.</i></p>	<p>1.8. Identify decisions that needed to be made during GESI responsive lesson planning how you can help student teachers to implement them in the basic school classroom after posting.</p> <p><i>Note:</i> <i>To ensure GESI responsiveness lesson planning, the following wide range of decisions needed to be made:</i></p> <ul style="list-style-type: none"> ➤ <i>Choice of learning materials to use</i> ➤ <i>Methodologies</i> ➤ <i>Content</i> ➤ <i>Learning activities</i> ➤ <i>Language use</i> ➤ <i>Classroom setup</i> ➤ <i>Classroom interaction</i> ➤ <i>Assessment of the learning/ learner</i> ➤ <i>Fair knowledge of the background of learners to inform all the above.</i> <p>1.2. Discuss GESI responsive lesson planning activities and how you would help the initial teachers to implement them in the basic school classroom after posting.</p> <p><i>Note:</i> <i>GESI Responsive Lesson Planning Activities:</i></p> <ul style="list-style-type: none"> • <i>Reviews student attendance every 2-3 months (particularly for females) - if there are problems with attendance, the teacher should follow up with the head teacher and parents.</i> • <i>Plan classroom seating so that males and females are mixed, and so that pupils who need more support sit at the front Protect students with disability from abuse or bully by other students.</i> • <i>Plan to use teaching strategies that ensure equal participation of both females and males. (Refer to Guidance note for integrating gender equality and social inclusion, Pg. 16)</i> 	
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<p>2 Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> ➤ Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.</p>	<p>2.1. List and explain the major concepts in lesson 11.</p> <p>2.2. Discuss the potential misconceptions and barriers with respect to the concepts listed.</p> <p>2.3. Discuss the potential barriers that may impede extending teachers’ learning and application of concepts learned in basic schools.</p> <p>2.4. Identify the most appropriate teaching strategies that can be employed to best deliver the new concepts in both CoE and basic school classroom to achieve the LOs and the LIs of the lesson.</p>	<p>15 mins</p>
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<p>3.Planning for teaching, learning and assessment activities for the lesson/s</p> <p>Reading and discussion of the teaching and learning activities</p> <p>Noting, addressing, and explaining areas where tutors may require clarification</p> <p>Noting opportunities for making <i>explicit links</i> to the Basic School Curriculum</p> <p>Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills</p> <p>Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning, subject specific examples should be provided for SL/HoD</p> <p>Resources: links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, YouTube, physical resources, power point; how they should be used. Consideration needs to be given to local availability</p> <p>Tutors should be expected to have a plan for the next lesson for student teachers</p>	<p>3.1. Read and discuss the appropriateness of the teaching and learning activities in the course manuals for the two course levels.</p> <p><i>Note: Tutors should go through the activities one after the other taking into consideration the coherency, methodology. time available, teaching and learning resources, and characteristics of learners as well as GESI related issues.</i></p> <p><i>E.g., (i) Plan to use exercises/activities that do not reinforce traditional gender roles and in some cases, actively challenges or reverses traditional gender roles.</i></p> <p><i>(ii) Review TLRs for traditional gender roles and ensures that materials are distributed and used equally between female and males</i></p> <p>3.1.1. Identify and discuss areas that need clarification.</p> <p>3.2. Discuss how the varied activities would be carried out in both CoE and basic school classroom to achieve the LOs and the LIs of lesson 11 from your course manuals.</p> <p>Note: <i>Ensure that the language used in instructing learners to carry out the varied activities is gender responsive.</i></p> <p><i>E. g.,1: Instead of “When everyone contributes <u>his</u> ideas, the discussion will be a success”.</i></p> <p><i>It may read: “When everyone contributes <u>his or her</u> ideas, the discussion will be a success”.</i></p> <p><i>2. Do not use harsh, threatening language or actions that instil fear in both females and males.</i></p> <p>3.3. Model how to co-plan, co-teach and co-reflect a lesson based on any selected concept in the semester.</p> <p>3.4. Discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed.</p>	<p>40 mins</p>
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	<p><i>E.g.</i></p> <p><i>(i). Prepare and use TLRs that attract the attention and interest of both female and male students, such as short video on science concept to be learned.</i></p> <p><i>(ii). Attract the interest of both female and male students, motivate them and provide relevance to the lesson learned.</i></p> <p>3.5. Explain how you would assist the student teachers to demonstrate the 21st century skill in the basic school classroom.</p> <p>3.6. Read the assessment activities in the various course manuals and identify areas that require clarification.</p> <p>3.7. Identify the inclusive resources needed for teaching and learning the concepts in both the CoE and basic school classrooms.</p> <p><i>E.g., Syllabus, teacher's handbook, pupil's textbook, student teachers ' book. ok.</i> <i>Also, curriculum, lesson notes, internet (if required), box.</i></p> <p>Note:</p> <p><i>(i). Make sure the resources are enough and appropriate to all learners (females, males and persons with SEN).</i></p> <p><i>ii). Let everybody have a concrete plan for teaching the given topics, thus, the activities agreed on by the group to be followed</i></p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ➤ Tutors should Identifying critical friends to observe lessons and report at next session ➤ Identifying and addressing any outstanding issues relating to the lesson/s for clarification 	<p>4.1. Provide feedback on this PD session taking into consideration – Clarity of concepts, pedagogical approaches employed, ICT integration, GESI, Twenty First Century Skills (NTS 1a, 3i,) and make notes that will help you to teach Lesson 11.</p> <p>4.2. Identify a critical friend who took part in this PD session lesson to sit in your class during lesson to provide feedback and report on observations made in the next PD session.</p>	<p>15 mins</p>

	<p>4.3. Discuss anything relating to Lesson 11 that needs clarification.</p> <p>Note:</p> <p><i>(i) Read lesson 12 (Review Lesson) from both course manuals and PD manuals and find relevant materials for the next session.</i></p> <p><i>(ii) Find out the challenges student teachers faced during their entire extending teaching for discussion in the next lesson.</i></p>	
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Tutor PD Session		
Age Levels/s: JHS	Name of Subject/s: <i>Chemistry and Physics: Course Review II with STS seminar</i>	
Year 4	Semester 2	
Tutor PD Session for Lesson 12 in the Course Manual		
<p>Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.</p>	<p>Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.</p>	<p>Time in session</p>
<p>1 Introduction to the session</p> <ul style="list-style-type: none"> ➤ Review prior learning ➤ A critical friend to share findings for a short discussion and lessons learned ➤ Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators ➤ Overview of content and identification of any distinctive aspects of the lesson/s, <p>NB The guidance for SL/HoD should identify, address and <i>provide explanations</i> for any areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement.</p> <p>NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p>1.1. Mention how students were well placed to employ the various strategies and skills during the Basic School classroom work including STS Field Experience.</p> <p>1.2. How useful were the previous PD sessions and how have they influenced your teaching over the weeks?</p> <p>1.3. A critical friend to give feedback on Lesson 7-11 which they observed.</p> <p>1.4. Read and discuss the introductory sections of the lesson up to and including learning outcomes and indicators of lesson 12.</p> <p><i>Example.</i></p> <p><i>JHS (Chemistry)-This lesson is a review and audit of the lessons for the second half of the semester as well as review and discussion of lessons learned, reflection and peer review of teaching and learning portfolios.</i></p> <p><i>JHS (physics) -The review and audit the lessons for the second half of the semester (from lesson 7-lesson 11). It is also expected that Student teachers will</i></p>	<p>20 mins</p>

	<p><i>reflect during this lesson on their own progress in the course.</i></p> <p>JHS- Learning Outcomes</p> <p>i) <i>Be able to reflect on lessons and state new insights or grey areas needing remedies</i></p> <p>ii) <i>Basis for co-planning and co-teaching</i></p> <p>JHS-Learning Indicators</p> <p>i) <i>Provide a reflection report on STS and demonstrations and illustrations on a given media of lessons learnt so far.</i></p> <p>ii) <i>Present teaching and learning e-portfolios developed throughout semester.</i></p> <p>1.5. In pairs discuss the distinctive aspects of lesson 7- 11 such as fundamental concepts and developing awareness of equity and diversity issues and issues on ICT</p>	
<p>As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.</p>	<p>1.6. Bring out and discuss the challenges the student teachers said they faced during the entire extending teaching.</p> <p>1.6.1. Explain how you will assist the student teachers to overcome their challenges so as to prevent them from occurring in their new schools when posted.</p>	
<p><i>For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.</i></p>	<p>1.7. Identify and discuss key GESI, ICT and cross-cutting issues you know that are very relevant but were not discussed in any of the PD sessions.</p> <p>1.7.1. Explain how you will assist the student teachers to integrate the key GESI, ICT and Cross-Cutting issues in their teaching when posted.</p>	
<p>2 Concept Development (New learning likely to arise in lesson/s):</p> <p>➤ Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or</p>	<p>2.1 Identify and discuss the major concepts in lesson 7-11.</p> <p>2.2 Use Think-Pair-Share to outline possible challenging areas in teaching and assessing of lesson 7- 11.</p>	15 mins

<p>pedagogy being introduced in the lesson, which need to be explored with the SL/HoD</p> <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.</p>	<p>2.3 Identify the most appropriate teaching strategies that can be employed to best deliver the new concepts in both CoE and basic school classroom to achieve the LOs and the LIs of the lesson apart from the once that was used in the previous lesson 7-11.</p>	
<p>3.Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> ➤ Reading and discussion of the teaching and learning activities ➤ Noting, addressing, and explaining areas where tutors may require clarification ➤ Noting opportunities for making <i>explicit links</i> to the Basic School Curriculum ➤ Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills ➤ Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning, subject specific examples should be provided for SL/HoD ➤ Resources: links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, YouTube, physical resources, power point; how they should be used. Consideration needs to be 	<p>3.1 Read and discuss of the teaching and learning activities from the course manual for lesson 7- 11.</p> <p>3.2. List and explaining areas where tutors may still require clarification for the lesson 7-11 and also making explicit links to the Basic School Curriculum.</p> <p>3.2 Discuss how GESI issues related to the teaching and learning activities of the lesson 7- 11 would be addressed in the case of unresolved.</p> <p>3.3 Read, identify and discuss continuous assessment opportunities in lesson 7-11 that can be added to what was already in the manual.</p>	<p>40 mins</p>

<p>given to local availability</p> <ul style="list-style-type: none"> ➤ Tutors should be expected to have a plan for the next lesson for student teachers 		
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ➤ Tutors should Identifying critical friends to observe lessons and report at next session <p>3. Identifying and addressing any outstanding issues relating to the lesson/s for clarification</p>	<p>4.1. Discuss anything relating to Lesson 7-12 that needs further clarification.</p>	<p>15 mins</p>

Appendix 1. Course Assessment Components, detail in the Revised NTEAP Toolkit (Sept. 21)

COMPONENT	SUBJECT PROJECT 1 per course per semester, individual or collaborative student teacher work.	SUBJECT PORTFOLIO 1 per course per semester, individual or collaborative student teacher work.
WHAT IS IT?	The Subject project is an assignment designed to enable student teachers to demonstrate achieving one or more of the CLOs, progress towards achieving identified NTS, development of knowledge and understanding of: the Basic School Curriculum, GESI responsiveness, using ICT and 21stC skills	The Subject Portfolio is the deliberate collection of student teachers' work that has been selected and organized for a particular subject to show student teacher's learning and progress to achieving the CLOs.
CONSTITUENTS	<p>Introduction: a clear statement of aim and purpose</p> <p>Methodology: what the student teacher has done and why to achieve the aim and purpose of the project</p> <p>Substantive or main section: Presentation of any artifacts, experiments, TLMs created for the project; presentation, analysis, and interpretation of what has been done, learned, or found out in relation to focus of the project.</p> <p>Conclusion: Statement of the key outcomes of the project; reflection on what the student teacher has learnt</p>	<p>Either 3 items of work produced during the semester or 2 items of work and a mid-semester assessment</p> <p>The items of work to be selected by student teachers, with tutor support, during the semester as best examples of their progress. For each item they select, Student teacher's need to reflect on: progress against identified NTS; achieving CLOs; increased knowledge and understanding of the Basic School Curriculum, GESI responsiveness, integration of ICT and how they could have approached developing the item differently to achieve a better outcome</p> <p>The mid-semester assessment: sssssssscase study, reflective note, quiz etc.</p>
WEIGHT	<p>Overall weighting of project = 30%</p> <p>Weighting of individual parts of project out of 100</p> <ul style="list-style-type: none"> <input type="checkbox"/> Introduction – 10 <input type="checkbox"/> Methodology – 20 <input type="checkbox"/> Substantive section – 40 <input type="checkbox"/> Conclusion – 30 	<p>Overall weighting of project = 30%</p> <p>Weighting of individual parts of portfolio out of 100</p> <ul style="list-style-type: none"> <input type="checkbox"/> Each item of work - 30 <input type="checkbox"/> Mid semester assessment - 30 - <i>if applicable</i> <input type="checkbox"/> Presentation and organisation of portfolio - 10

EXAM	End of semester Exam, weight 40%. To assess: achievement of one or more of the CLOs, progress towards achieving identified NTS, development of knowledge and understanding of the Basic School Curriculum, ability to use GESI responsive approaches and to integrate ICT and 21 st C skills in teaching and learning
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Examples of course assessment components

Subject portfolio examples of items of work

Literacy:

- o Reading log of children's literature
- o Review of different types of writing and how to teach them
- o Book summaries/reports
- o Report on different purposes for and types of reading or writing
- o Vocabulary achievement
- o Schemes of work

Mathematics:

- o Samples of problem solving with written explanations of how the problems were solved and how this can be taught
- o Charts and graphs with written explanations of how and why they were created and how this can be taught
- o Computer analyses conducted as well as use of software to teach mathematics and how effective they are
- o Use indigenous knowledge in mathematics teaching.
- o Schemes of work

Science

- o Lab reports,
- o Research reports
- o Charts, graphs created
- o Designs, TLMs, posters, worksheets
- o Integrating indigenous knowledge into science teaching
- o Schemes of work

Subject project examples

- o *Pedagogic Studies*. What are the qualities you need to develop to be a good teacher? Reflect on your personal experiences, values, and background, the NTS and the expectations of, and vision for, the B.Ed.

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T-TEL Support Team	
Professor Jophus Anamuah-Mensah	T-TEL – T-TEL Board Chair
Professor Jonathan Fletcher	T-TEL – Key Advisor, Teaching & Learning Partnerships
Bea Noble-Rogers	T-TEL – International Teacher Education Curriculum Expert
Dinah Adiko	T-TEL – Key Advisor, Gender Equality and Social Inclusion
Beryl Opong-Agyei	T-TEL – National Teacher Education Coordinator
Marjorie Tackie	T-TEL – Gender Equality and Social Inclusion Coordinator
Hawa Nindow	T-TEL – University Coordinator
Peter Chammi Jayom	T-TEL – University Coordinator
Wilhemina Gyamfi	T-TEL – University Coordinator
Issahaku Abudulai	T-TEL – University Coordinator
Victor Sunkwa Asamoah	T-TEL – Education Advisor
James Adefrah	T-TEL – Education Advisor
Roger Kwamina Aikins	GM – Commercial (Oversees design, print and distribution)

SUBJECT WRITING TEAM

SUBJECT	NAME	INSTITUTION
Mathematics	Prof. Gabriel Asare Okyere	Kwame Nkrumah University of Science and Technology, Kumasi
	Eric Abban	Mt. Mary College of Education, Somanya
	Eric Kwame Austro Gozah	Dambai College of Education Dambai
	Akuffo Frank Assah	University for Development Studies, Tamale
French	Dr Stella Afi Makafui Yegblemenawo	Kwame Nkrumah University of Science and Technology, Kumasi
	Osmanu Ibrahim	Mt Mary College of Education, Somanya
	Felix Asare Odonkor	University of Education, Winneba
Language and Literacy	Prof. Charles Owu-Ewie	University of Education, Winneba
	Dr. Abraham Okrah	University of Ghana, Legon Accra
	Dr. Kwesi Adomako	University of Education, Winneba
	Dr. Yvonne Akwele Ollenu	University of Education, Winneba
	Dr. Sarah Emma Eshun	University of Education, Winneba
	Abdul-Moomin Abdul-Aziz	Nusrat Jahan Ahmadiyya College of Education, Wa
	Comfort Dorvlo	Accra College of Education, Accra
	Freda Asante-Kumi	Accra College of Education, Accra
	Awudu Rafick	University for Development Studies, Tamale
PEMD	Justice Gideon Adjerakor	University of Education, Winneba
	Godfred Teye Mensah Akuffo	Bia Lamplighter College of Education, Sefwi Debiso
	Philemon D.K. Agbenyega	Dambai College of Education, Dambai
	Dr. Emmanuel Osei Sarpong	University of Education, Winneba
Pedagogy	Prof. Winston Kwame Abroampa	Kwame Nkrumah University of Science and Technology, Kumasi
	Dr. Maxwell Kwesi Nyatsikor	University for Development Studies, Tamale
	Dr. John Sedofia	University of Ghana, Legon Accra

	Prof. Dandy George Dampson	University of Education, Winneba
	Fadilata Seidu	Nusrat Jahan Ahmadiyya College of Education, Wa
	Kweku Essia Donkor	University of Education, Winneba
	Dr. Yaw Nyadu Offei	University of Education, Winneba
	John Aditorem	Tumu College of Education, Tumu
Science	Prof. Rueben Yao Tamakloe	Kwame Nkrumah University of Science and Technology, Kumasi
	Maxwell Bunu	Ada College of Education, Ada
	Valentina Osei-Himah	Atebubu College of Education, Atebubu
	Comfort Korkor Sam	University for Development Studies, Tamale
	Ambrose Ayikue	St. Francis College of Education, Hohoe
ICT	Victoria Boafo	Mampong Technical College of Education, Ashanti Mampong
	Richard Adusei	University for Development Studies, Tamale
	Paul Mensah	St. Louis College of Education, Kumasi
TVET	Rev. Dr. Nyuieko Avotri	Former Principal, Mampong Technical College of Education, Ashanti Mampong
	Michael Eco Adixey	Akatsi College of Education, Akatsi
	Rev Godwin Gbadagba	Dambai College of Education, Dambai
	David Ankutse	Accra College of Education
	Grace Annagmeng Mwini	Tumu College of Education
	Rejoice Makafui Tsotorvor	Akatsi College of Education, Akatsi
Social Sciences	Dr Dacosta Aboagye	Kwame Nkrumah University of Science and Technology, Kumasi
	Dr. Mohammed Adam	University of Education, Winneba
	Tia Yahaya	Tamale College of Education, Tamale
	Stephen Koomson	St Vincent College of Education, Yendi
	Joseph Mihaye	Accra College of Education, Accra
	Ibrahim Abudulai	Gambaga College of Education, Gambaga
	Limpu Isaac Digbun	Bagabaga College of Education, Tamale
	Felix Dongballe	McCoy College of Education, Nadowli
	Burukum Achor	Dambai College of Education, Dambai
	Mercy Sarpong Mintah-Botchey	Presbyterian College of Education, Akropong
	Salifu Fawzi Rahaman	Nusrat Jahan Ahmadiyya College of Education, Wa

