

**Annex VII - B: Student-centred teaching and learning methods in the subject areas of Science**

Categories of Learning outcomes	General student-centred teaching and learning methods recommended by SLQF	Specific Student-centred teaching and learning methods in Sciences
<b>1. Subject / Theoretical Knowledge</b>	Independent learning activities, interactive lectures, team-based learning, and other small group activities	<p>In class- completing a gapped hand out during a lecture using a power-point presentation, inclusion of appropriate questions to be answered in class while lecture is progressing</p> <p>Activity based learning sessions and group discussions made in a course on Principles of Human Behaviour</p> <p>Preparation of powerpoint presentations from additional assigned reading for each lesson as an Independent learning activity in a course</p>
<b>2. Practical Knowledge and Application</b>	Problem-based learning, team-based learning, inquiry-based learning, practical classes, laboratory sessions, role play	<p>Practical session of determining chlorophyll in leaves using appropriate equipment and methods.</p> <p>Mini project conducted for a course in plant eco physiology on one of plant stress factors.</p> <p>Video production done on a problem related to natural resource management in Sri Lanka, presenting the measures which can be used to overcome the problem.</p> <p>Group visits to the severely affected areas for each problem and a role play to depict the effect of the problem on different sectors of the community.</p> <p>Field work during one whole semester for the farm practice course</p>
<b>3. Communication</b>	Student presentations, role play, debates, dramas	<p>Proposal presentation by individual students for a research project in final semester.</p> <p>Video production for a course in Postharvest Technology by analysing a case study in Dambulla market</p> <p>Concept dramas for a course on Principles of Human Behaviour</p>

<p><b>4. Teamwork and Leadership</b></p>	<p>Group projects, industrial training, small group learning; e.g. problem-based learning, games</p>	<p>Preparation of a model as a small group (5) to depict specific concepts in a subject. Explanations regarding model to a team of teachers(evaluators), taking turns to do the explanations</p> <p>Business project conducted for a course in Project Analysis</p> <p>Visits made to a reputed organization as groups to understand the organizational behaviour and reporting on the success and strengths.</p>
<p><b>5. Creativity and Problem Solving</b></p>	<p>Assignments, projects, small group learning activities; e.g. problem-based learning</p>	<p>Mini project to determine drought stress on plants – worked throughout a semester</p> <p>Undertaking a business for profit earning and introducing a new venture</p> <p>Group activity on cost benefit analysis of an innovative project in a course for Project Analysis</p> <p>New product development from animal based raw materials.</p> <p>Designing suitable landscaping models for given situations</p>
<p><b>6. Managerial and Entrepreneurship</b></p>	<p>Group projects, industrial training, small group learning; e.g. problem-based learning, games, simulated training, industrial (workplace-based) training</p>	<p>Conducting a business project based on a new idea and earning a minimum profit limit of Rs 25,000.00 as a group</p> <p>Production of pot plants as a business venture</p>
<p><b>7. Information Usage and Management</b></p>	<p>Assignments, presentations, projects, case studies</p>	<p>Weekly assignments to be submitted through email</p> <p>Video production using a case study related to natural resource degradation and pollution</p> <p>Presentations made after self -studying the aspects of the development process of certain countries.</p>
<p><b>8. Networking and Social Skills</b></p>	<p>Student presentations, role-play, debates, dramas</p>	<p>Group of students in a google group sharing information on current topics in a course</p> <p>A drama / video production based on social issues for Principles of human</p>

		<p>behaviour,</p> <p>Visits made to a reputed organization as groups to understand the organizational behaviour and reporting on lessons learnt.</p> <p>Independent learning activities done on weekly basis in a course on Scientific Communication</p>
<b>9. Adaptability and Flexibility</b>	<p>Group projects, industrial training, small group learning; e.g. problem-based learning, role plays, portfolios</p>	<p>In cultivation of crops, action to be taken when unexpected harmful effects set in and disturbs the routine procedures, in order to minimize damage</p> <p>Doing a business project for a course in Project analysis</p> <p>Farm family visits for a course in Developmental Extension to learn about adaptability to different family scenarios</p> <p>In-plant training programme at a private enterprise</p>
<b>10. Attitudes, Values and Professionalism</b>	<p>Group projects, industrial training, small group learning; e.g. problem-based learning, role play, portfolios</p>	<p>Attitude and attention to style of speech and approach for self to make a presentation to the departmental community.</p> <p>Identifying a successful organization and interview them to learn about success factors</p> <p>In-plant training programme - Development of a log book and portfolio to build up on professionalism for aspects of time management, attention to detail and care for persons and equipment</p>
<b>11. Vision for Life</b>	<p>Portfolios, reflective practice</p>	<p>A portfolio development from 1<sup>st</sup> to final year with goals and ambitions for the future and efforts at achievements</p> <p>Interviewing and identifying a businessman who is successful in his field to learn about lifetime experiences</p> <p>Self- made SWOT analysis for a course in Career Development and further development by having discussion sessions with individual academic advisors.</p>

<p><b>12. Updating Self / Lifelong Learning</b></p>	<p>Portfolios, reflective practice</p>	<p>A topic worked on during specialization where new trends are reported with comments by self about it.</p> <p>Reflecting on one's achievements during classes and university life in order to realize success and failures and ways of overcoming the latter</p>
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