COURSE INFORMATION

1. Course:
   Introduction to Integrated Waste Management for Environmental Managers, (CEM-06.2.1)

2. NQF Level:
   
<table>
<thead>
<tr>
<th>NQF Level</th>
<th>5</th>
</tr>
</thead>
</table>

3. Unit Standards:
   3.1 Based on:
      None available.

   3.2 Aligned with:

<table>
<thead>
<tr>
<th>U/S No.</th>
<th>U/S Title</th>
<th>NQF Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>119822</td>
<td>Collect data for environmental management purposes</td>
<td>3</td>
</tr>
<tr>
<td>119821</td>
<td>Implement lean work practices to ensure sound environmental management practices</td>
<td>3</td>
</tr>
<tr>
<td>13647</td>
<td>Investigate options for improved environmental management and sustainable living</td>
<td>5</td>
</tr>
<tr>
<td>264461</td>
<td>Demonstrate an understanding of Integrated Waste Management</td>
<td>5</td>
</tr>
<tr>
<td>7173</td>
<td>Plan and implement a waste management system</td>
<td>6</td>
</tr>
<tr>
<td>116417</td>
<td>Plan and implement a waste management system</td>
<td>5</td>
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</table>

4. Credits:
   Not determined.
5. Registration for Continual Professional Development:
   • Health Professions Council of South Africa.
   • Engineering Council of South Africa.

6. Introduction:
The unbridled generation of waste and poor waste management practices, especially with regard to waste disposal on land, have caused widespread environmental impacts which have received worldwide attention. South-Africa has not escaped this trend and much attention is being given to waste management practices. It is imperative that environmental managers in South Africa are aware of the latest developments in Integrated Waste Management Practices, the technical aspects of sustainable land-based waste management and relevant legislation.

7. Aim:
The aim of the course is to provide delegates with a basic understanding of the integrated waste management principles and hierarchy, integrated waste management planning, industrial waste classification, waste transportation, waste disposal site selection, evaluation and permitting, and the site operation, monitoring and auditing thereof. The course focuses on new trends in land-based waste disposal, including waste management, best practices in sustainable land filling, as well as recycling and alternative technologies. The Course specifically enhances your capacity to grasp the technical and practical aspects of the land-based disposal component of Integrated Waste Management and is augmented by our new Course entitled “Legal Framework for Integrated Waste Management in South Africa”, which inter alia addresses the legal aspects of IWM.

8. Course Objectives and Specific Outcomes:
   • Understanding the principles of and key terminologies used in integrated waste management and the hierarchy of waste management;
   • Insight into waste issues, and their effects on the environment and people, and awareness of relevant measures and solutions to address these issues in an integrated manner;
   • Obtaining insight into integrated waste management planning;
   • Understanding the procedures and methodologies used for the classification of waste to be disposed on land;
   • Obtaining insight into alternative technologies for dealing with low moisture content waste, e.g. incineration, etc;
   • Understanding the complexities associated with the transportation of hazardous waste;
• Grasping the Minimum Requirements for the classification, registration and permitting of waste disposal sites;
• Obtaining insight into site selection, design, preparation and operation of landfill sites; and
• Sensitivity to landfill site monitoring and auditing.

A practical programme forms an integral part of the course and consists of a number of practical exercises to address the various learning themes in one integrated case study. A site visit to practically illustrate aspects discussed also forms part of the course.

9.1 Attendance:
Minimum attendance of 80% of the duration of the course is required.

9.2 Continuous Student Assessment:
Students are continuously assessed on a daily basis. Tutors award a Daily Assessment Score (DAS), based on an evaluation of individual students’ presence, punctuality and achievement of course objectives. A Total Daily Assessment Score (TDAS) is calculated by summing the DAS for every day of the course duration, divided by the number of days.

9.3 Assessment of Practical Work:
Participation in and achievement of objectives for practical work are also assessed and a Total Practical Assessment Score (TPAS) is awarded. The TPAS is awarded for syndicate group work.

Syndicate groups shall submit a portfolio of evidence of practical work done, either as hard copies of work completed, or as electronic files on a CD.

9.4 Take-away Assignment:
Not applicable.

9.5 Calculation of Final Continuous Assessment Score:
The TPAS and TDAS contribute to the Final Continuous Assessment Score (FCAS), at a ratio of 60% (TPAS) to 40% (TDAS).

9.6 Examination:
A formal open book examination is written on the last day of the course in order to obtain a formal examination score (FES). Students require a FCAS of at least 50% and course attendance of at least 80% to be allowed to sit for the examination.

The time limit of 1 hour will be strictly adhered to.

9.6.1. Documents to be Used During the Examination:
Reference material that may be used during the examination is limited to the student’s file provided during the course, notes made during the course, a copy of the student’s legislation files, as well as dictionaries.
9.6.2. Re-examination:

Students who qualified for a Letter of Attendance at the initial course may request to sit for a re-examination within twelve months of writing the initial examination if a FSAS of at least 50%, a sub-minimum FES of at least 40% and attendance of at least 80% was achieved.

The FCAS achieved during the first examination event shall be used when the FSAS is calculated following any re-examination.

9.7 Calculation of Final Student Assessment Score (FSAS):

The FES and FCAS contribute to the Final Student Assessment Score (FSAS) at a ratio of 60% (FES) to 40% (FCAS).

9.8 CEM Pass Norm:

It is expected that at least 75% of student attending this course, should pass.

9.9 CEM Assessment Process:

In order to meet SAQA and North-West University quality requirements, the CEM assessment process incorporates not only the grading of examination papers, but a rigorous process also involving moderation and independent approval of all assessment results by an internal CEM assessment panel. Due to the fact that the panel only meets once a month, it will take approximately 2-3 months before final course results will be released.

Electronic results letters will be sent to all students shortly after the approval of the assessment results by the CEM assessment panel. The Certificates/original Letters of Attendance will be posted shortly thereafter by registered post, or as soon as payment has been received.

10. Certificates and Letters of Attendance:

To be awarded a Certificate of Successful Completion, students require:

- a FSAS of not less than 60%;
- a FES of not less than 50%; and
- course attendance of 80%.

Students who do not qualify for a Certificate of Successful Completion, may be awarded a Letter of Attendance, should all requirements be met. To be awarded a Letter of Attendance, students require:

- a FSAS of not less than 50%;
- a FES of not less than 40%; and
The North-West University is registered with the Department of Education as a multi-purpose Higher Education learning provider. The Higher Education Quality Committee (HEQC) is the Education and Training Quality Assurance Body (ETQA) of this sector. Due to this status (as accredited multi-purpose higher education provider, quality assured by the Higher Education Quality Committee (HEQC), it is not necessary to register as a training service provider with a specific Sector Education and Training Authority (SETA).

The HEQC does not have the capacity to do quality assurance on all short course training offered at higher learning institutions. It has therefore delegated the authority for quality assurance to the individual higher learning institutions. The North-West University has an agreed upon quality management process in place for both formal qualifications and short courses. All the CEM short courses are registered with the Institutional Committee for Academic Planning and Standards of the North-West University and are managed in accordance with both the University's and the Higher Education Quality Committee (HEQC) requirements.

12. Complaints and Appeals:

Students may raise any complaint in writing or verbally, both during the course and afterwards. Students are also given the opportunity to raise any issues during the formal evaluation of all aspects at the end of the course.

Students with a score less than the specified minimum may appeal in writing to the CEM Management Representative, should there be any grounds for appeal. Contact Ms Hettie Smit at hettie.smit@nwu.ac.za or +27 (0) 18 299 2723.

13. Entrance Requirements:

A Grade 12 certificate as a minimum and preferably also:

- some tertiary education in at least one of the fields of environmental management; or
• Some basic knowledge of and some relevant activities and responsibilities in at least one of the fields of environmental management and preferably some impact or risk assessment experience.

No additional prior learning is required, as this is an entry level course.