**TEMPLATE FOR COURSE SPECIFICATION**

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

Course Instructor : Assisst. Prof. Dr.Hyader M. Hameed

**COURSE SPECIFICATION**

**Full knowledge Environmental management, regulations, legislations, laws, EMP, ESIA, RISK ASSESSMENT, ENVIRONMNETAL PERFORMANCE.**

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| 1. Teaching Institution | College of engineering |
| 2. University Department/Centre | Environmental Eng.Dept. |
| 3. Course title/code | Environmental management |
| 4. Modes of Attendance offered | 2 hours per week |
| 5. Semester/Year | year |
| 6. Number of hours tuition (total) | 56 hr. |
| 7. Date of production/revision of this  specification | 2019 |
| 8. Aims of the Course | |
| 1-implementation of the sustainability principle | |
| 2-conducting a knowledge of risk management and awareness | |
| 3-applying of the EIA ,ESMP principles for different activities | |
| 4-aquaire a good experience in the WQI,AQI,LC,and EPI for al activities | |
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9· Learning Outcomes, Teaching ,Learning and Assessment Methode

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| |  | | --- | | A1. After completion of the year students should be able to conduct the reporting and management  Analysis for the projects | | A2. Auditing reporting periodically for the major polluted activities. |   A3. Conducting the risk management ,WQI,AQI,EPI for any activity |
| B.  B1.Understand risk management, environmental policies related to any activity.  B2.conducting different reports regarding ISO14001,environmental auditing and monitoring  B3.reporting as WQI,AQI,EPI with all related management issues  B3.be aware of all related risk management for the dominant activities. |
| Teaching and Learning Methods |
| Class lecturing ,site visits, case studies applications |
| Assessment methods |
| 1.national case studies and problems  2.homeworks  3.reporting |
| C. Affective and value goals:  C1.to be more aware of laws, regulations and instructions.  C2.the students be more succeeded in the good environmental management programs in environmental engineering |
| Teaching and Learning Methods |
| Learning of laws, regulations, legislations, studying the actual and real cases. |
| Assessment methods |
| 1.homeworks  2.reporting  3.group discussion  4. Virtual assessment. |

D. General and rehabilitative transferred skills(other skills relevant to employability and personal development)

D1. Improve their knowledge, awareness, motive and skills for environmental management

D2.learning how to be good decision makers regarding any action related to environmental problems

D3. Learn how to make,EMP,ESIA,WQI,AQI,RAR, environmental monitoring and auditing

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| 10. Course Structure | | | | | |
| Week | Hours | ILOs | Unit/Module or  Topic Title | Teaching  Method | Assessment  Method |
| 1 | 2 | Definition and applications | Environmental management | Electronic | Exams ,quiz,reports, discussions |
| 2 | 2 | Report structure | EMP reporting | Electronic | Exams ,quiz,reports, discussions |
| 3 | 2 | Report structure | ESIA reporting | Electronic | Exams ,quiz,reports, discussions |
| 4 | 2 | Matrix structure | EMP, matrix | Electronic | Exams ,quiz,reports, discussions |
| 5 | 2 | Matrix structure | WQI matrix | Electronic | Exams ,quiz,reports, discussions |
| 6 | 2 | Matrix structure | AQI matrix | Electronic | Exams ,quiz,reports, discussions |
| 7 | 2 | Index component | Environmental performance index | Electronic | Exams ,quiz,reports, discussions |
| 8 | 2 | components | Risk assessment reporting | Electronic | Exams ,quiz,reports, discussions |
| 9 | 2 | structure | ISO 14001 | Electronic | Exams ,quiz,reports, discussions |
| 10 | 2 | structure | ISO14003, | Electronic | Exams ,quiz,reports, discussions |
| 11 | 2 | methodology | Environmental auditing | Electronic | Exams ,quiz,reports, discussions |
| 12 | 2 | methodology | Environmental monitoring | Electronic | Exams ,quiz,reports, discussions |
| 13 | 2 | methodology | ESIA matrix | Electronic | Exams ,quiz,reports, discussions |
| 14 | 2 | structure | ISO14004 | Electronic | Exams ,quiz,reports, discussions |
| 15 | 2 | structure | **ISO 14063**Environmental communication - Guidelines and examples | Electronic | Exams ,quiz,reports, discussions |
| 16 | 2 | structure | **ISO 14050** Environmental management - Vocabulary; terms and definitions | Electronic | Exams ,quiz,reports, discussions |
| 17 | 2 | structure | **ISO 14020** to **14025** Environmental labels and declarations | Electronic | Exams ,quiz,reports, discussions |
| 18 | 2 | structure | * **ISO 14005**  Guidelines for a flexible approach to phased implementation | Electronic | Exams ,quiz,reports, discussions |

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| 11. Infrastructure | |
| 1. Books Required reading: | 1. Wastewater treatment concept, G.HKARIA 2. Water and Wastewater Treatment Technologies BUUI.X |
| 2. Main references (sources) | As above |
| A- Recommended books and references (scientific journals, reports…). | Journal of water , by elsiever |
| B-Electronic references, Internet  sites… | <https://www.process.st/environmental-management/>  <https://www.epa.gov/ems/learn-about-environmental-management-systems>  https://www.era-environmental.com/blog/environmental-management |

The development could concentrate on more applications

12. The development of the curriculum plan