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| Faculty               | Management and Social Science  |        |
| Department            | Economics  |        |
| Course Title          | Energy and Petroleum Economics   |        |
| Year of Study         | 4  |        |
| Course Code           | ECN 413  |        |
| Credit Hours          | 2  |        |
| Contact Hours         | 30   |        |
| Mode of Delivery      | Classroom Lectures   |        |
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| Mode of Assessment    |  | Weight |
| Continuous Assessment |  | 30%    |
| Final Examination     |  | 70%    |
| Total                 |  | 100%   |
| Course Lecturer       | Mr. O.O. Awelewa   |        |
| Course Description    | This course has to do with the world petroleum market in the context of overall energy markets. The main features of the evolving petroleum market are examined including energy tax, price regulation, energy efficiency as well as energy policy formulation in Nigeria.   |        |
| Course Objectives     | This course would enable the understanding of the following: <ol style="list-style-type: none"> <li>1. Introduction to energy Economics</li> <li>2. Energy market (Demand and Supply)</li> <li>3. Energy Data and Energy Balance</li> <li>4. Energy System and energy Intensities</li> <li>5. Oil and gas sector reforms</li> <li>6. Electricity and power sectors</li> <li>7. Energy efficiency and tax</li> <li>8. Energy policy formulation in Nigeria</li> </ol> |        |
| Learning Outcomes     | By the end of the course, students will be able to: <ol style="list-style-type: none"> <li>1. Explain the meaning of energy</li> <li>2. Discuss energy demand, supply and market</li> <li>3. Analyze issues involving the oil and gas sector</li> <li>4. Discuss electricity and power sectors</li> <li>5. Explain energy efficiency and tax</li> <li>6. Analyze energy policy formulation in Nigeria</li> </ol>   |        |
| Teaching and Learning | The class will meet for two hours every week for a combination of both the lecture hours and tutorials.  |        |

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| Detailed Course Content | The class commences with the meaning of energy economics and complexity involved in the study of energy economics, various classification of energy, evolution of energy, energy data and balance, energy system, energy demand energy intensities, oil and gas sector, electricity and power as well Organization of Petroleum Exporting Countries (OPEC). |                |
|                         | Course Content Sequencing   |                |
| Weeks                   | Detailed Course Outline   | Allocated Time |
| Week 1                  | <p>Introduction to Energy Economics</p> <ul style="list-style-type: none"> <li>• Definition of energy economics</li> <li>• Complexity involve in study energy economics</li> <li>• Classification of energy economics</li> </ul>  |                |
| Week 2                  | <p>Alternative classification of energy</p> <ul style="list-style-type: none"> <li>• Primary and secondary</li> <li>• Renewable and non-Renewable Energy</li> <li>• Commercial and non- Commercial energy</li> </ul>  |                |
| Week 3,4                | <p>Energy data and energy balance</p> <ul style="list-style-type: none"> <li>• Meaning of energy balance</li> <li>• Analysis of energy balance information</li> <li>• Energy accounting framework</li> <li>• Unit of measurement and conversion factors</li> </ul>  |                |
| Week 5                  | <p>Energy System</p> <ul style="list-style-type: none"> <li>• Description of energy system</li> <li>• Energy system flow chart</li> </ul>   |                |
| Week6, 7                | <p>Energy Demand</p> <ul style="list-style-type: none"> <li>• Definition of Energy Demand</li> <li>• Evolution of energy demand</li> <li>• Overview of energy demand analysis</li> <li>• Economic foundation of energy demand</li> </ul>  |                |

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| week 8   | <p>Energy Intensities</p> <ul style="list-style-type: none"> <li>• Introduction of energy intensities</li> <li>• Factor or Decomposition Analysis</li> </ul>  |  |
| Weeks 9  | <p>Oil and Gas Sector in Nigeria</p> <ul style="list-style-type: none"> <li>• Upstream sector</li> <li>• Midstream sector</li> <li>• Downstream sector</li> <li>• Prospect /Investments opportunities in downstream</li> </ul>  |  |
| Week 10  | <p>Electricity and Power Sector</p> <ul style="list-style-type: none"> <li>• Economics of electricity industries</li> <li>• Evolutionary trends and the future of power sector in Nigeria</li> <li>• Rural Electrification</li> <li>• Sources of Electricity</li> <li>• Problems facing power Sector</li> </ul> |  |
| Week 11  | <p>Organization of Petroleum Exporting Countries (OPEC)</p> <ul style="list-style-type: none"> <li>• Evolution/ Role of OPEC</li> <li>• Functions and Mission of OPEC</li> <li>• Conflicts among OPEC countries</li> </ul>  |  |
| 12   | Revision  |  |
| 13,14  | Examination   |  |
| <p>Recommended Reading Material</p> <p>Jhingan, M.L. &amp; Sharma, C.K. (2008). Environmental Economics. Vrinda Publications (P) Limited</p> |   |  |