



## Integrating education with consumer behaviour relevant to energy efficiency and climate change at the universities of Russia, Sri Lanka and Bangladesh (BECK)

### MODULE SPECIFICATION

Originating Institution, Department	Module Co-ordinator(s)
Patuakhali Science and Technology University (PSTU), Dept. of Land Record and Transformation	Mr. Md. Abubakkor Siddik Assistant Professor, Dept. of Land Record and Transformation, PSTU

### TITLE OF THE MODULE

Title of the module	Module code <sup>1</sup>
Land Use and Energy	LRT 223

### PROGRAMME(S) IN WHICH TO BE OFFERED:

Land Management and Administration
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### LEVEL OF STUDIES<sup>2</sup>

First cycle (BSc/BA/LLB) <input checked="" type="checkbox"/>	Second cycle (MSc/MA) <input type="checkbox"/>	Third cycle (PhD) <input type="checkbox"/>
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### CREDITS AND LEARNING HOURS

Credit Value <sup>3</sup>	ECTS Value <sup>4</sup>	Indicative academic learning hours <sup>5</sup>	Length (in Semesters) <sup>6</sup>	Year in which to be offered
2	2	60*	1 (6-months)	2

\* In Bangladesh, 2 credit value represent 16\*2=32 contact hours. We have added additional 28 notional hours for this course which will be achieved by assignment and homework.

*Shamir*  
11.10.2021

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<sup>1</sup> To be indicated by the Institution

<sup>2</sup> According to the Framework of Qualifications for the European Higher Education Area, Annex 8:  
[http://www.aic.lv/ace/ace\\_disk/Bologna/Bergen\\_conf/Reports/EQFreport.pdf](http://www.aic.lv/ace/ace_disk/Bologna/Bergen_conf/Reports/EQFreport.pdf)

<sup>3</sup> Permissible credit values as set out in Institution's Academic Regulations

<sup>4</sup> European Credit Transfer System, 1 ECTS = 25-30 academic learning hours. Please refer to ECTS Users' Guide: [https://ec.europa.eu/education/ects/users-guide/docs/ects-users-guide\\_en.pdf](https://ec.europa.eu/education/ects/users-guide/docs/ects-users-guide_en.pdf)

<sup>5</sup> 1 academic learning hour is equal to 45 minutes

<sup>6</sup> Indicate 0.5, 1, 1.5 or 2





## Course Details

(As per guideline of University Grants Commission, Bangladesh)


**Programme:** Land Management and Administration

**Degree:** Bachelor of Laws (Hons.) in Law and Land Administration

### Part A- Introduction

1. Course Code	:	LRT 223
2. Course Title	:	Land Use and Energy
3. Course Type	:	Core Course (Online)
4. Level/Term and Section	:	Level-2, Semester-II
5. Academic Session	:	2018-19 and onward
6. Pre-requisite (If any)	:	Not applicable
7. Credit Value	:	02 (Two)
8. Contact Hours	:	32 (Thirty-Two)
9. Total Marks	:	100
10. Course Objectives	:	The main objective of this online course is to produce skilled graduate ensuring green environment through building energy efficient land use.
11. Course Learning Outcomes (CLO)	:	At the end of the course, the student will be able to: <b>CLO-1:</b> Describe the importance of land use, energy, and energy efficiency and define the basic terminology including land use, land use planning, energy efficiency, energy consumption; <b>CLO-2:</b> Recognize the relationship between man and land as well as explain the historical evolution of land use study; <b>CLO-3:</b> Characterized the factors of land use change; <b>CLO-4:</b> Correlate the association between land use and energy; <b>CLO-5:</b> Analyse and explain the global trends in energy use; <b>CLO-6:</b> Explain the theoretical basis of land use planning and guide to formulate a local land use plan; and <b>CLO-7:</b> Understand and evaluate existing land use and energy policies in Bangladesh.

### Part B- Content of the Course

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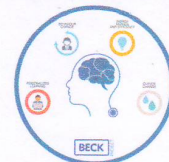
Course Content	Specific Outcome(s)	Time Frame	Teaching Strategy(s)	Alignment with CLO
<b>Introduction and Basic terminology:</b> introduction to the module, land use, land use planning, energy efficiency, energy consumption	<ul style="list-style-type: none"> <li>To acquire the general idea about the course</li> <li>To grasp the content and strategy for the class</li> <li>To introduce the basic terminology</li> </ul>	Week 1	<ul style="list-style-type: none"> <li>Audio-visual materials</li> <li>Online lecturing</li> <li>Group discussion</li> <li>Q&amp;A session</li> </ul>	Developed interest of the students on LU & EE, and basic terminology linked with CLO 1.
<b>Fundamental Aspects of Land Utilization:</b> Man-land relationship, meaning of land use, and history of land use study	<ul style="list-style-type: none"> <li>To discuss man-land relationship</li> <li>To make them able to explain the historical evolution of land use study</li> </ul>	Week 2 Week 3	<ul style="list-style-type: none"> <li>Audio-visual materials</li> <li>Online lecturing</li> <li>Group discussion</li> <li>Q&amp;A session</li> <li>Big data mining</li> </ul>	Developed interest of the students on different environmental impacts of RETs linked with CLO 2.
<b>Factors of land use change:</b> biophysical factors (topography, soil characteristics), socio-economic factors (demographic, industrialization, urbanization, economic and technological, institutional, and cultural factors), globalization, natural variability, interaction of causes	<ul style="list-style-type: none"> <li>To identify the factors of land use change</li> <li>To explain the interaction among the different factors of land use change</li> </ul>	Week 4 Week 5	<ul style="list-style-type: none"> <li>Audio-visual materials</li> <li>Online lecturing</li> <li>Group discussion</li> <li>Q&amp;A session</li> <li>Big data mining</li> </ul>	Developed interest of the students on RE commercialization linked with CLO 3.
<b>Land use and energy connection:</b> impacts of energy on land use (conventional and non-conventional energy), impacts of land use on energy efficiency (mixed land use development, urban block development, transit-oriented development, combined heat and power, green spaces, energy support land use policies)	<ul style="list-style-type: none"> <li>To explain the impacts of energy on land use change</li> <li>To describe the impacts of land use on energy efficiency</li> </ul>	Week 6 Week 7	<ul style="list-style-type: none"> <li>Audio-visual materials</li> <li>Online lecturing</li> <li>Group discussion</li> <li>Q&amp;A session</li> <li>Big data mining</li> </ul>	Linked with CLO 4
<b>Global trends in energy use:</b> global trends in coal, oil, natural gas	<ul style="list-style-type: none"> <li>Analyse and explain the global trends in energy use particularly fossil fuels</li> </ul>	Week 8	<ul style="list-style-type: none"> <li>Audio-visual materials</li> <li>Online lecturing</li> <li>Group discussion</li> <li>Q&amp;A session</li> </ul>	Linked with CLO 5

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Course Content	Specific Outcome(s)	Time Frame	Teaching Strategy(s)	Alignment with CLO
			<ul style="list-style-type: none"> <li>• Big data mining</li> </ul>	
<b>Land use planning:</b> definition, principles of land use planning, the planning process, the focus of land-use planning, land use planning at different levels, people in planning, steps in land-use planning	<ul style="list-style-type: none"> <li>• To characterize the principles of land use planning</li> <li>• To identify the focus area of land use planning</li> <li>• To explain different planning level             <ul style="list-style-type: none"> <li>• To describe the people's relationship with planning</li> </ul> </li> <li>• To explain different steps in land use planning</li> </ul>	Week 9 Week 10 Week 11	<ul style="list-style-type: none"> <li>• Audio-visual materials</li> <li>• Online lecturing</li> <li>• Group discussion</li> <li>• Q&amp;A session</li> <li>• Big data mining</li> </ul>	Linked with CLO 6
<b>Land use and energy policies in Bangladesh:</b> National Land Use Policy (2001), Bangladesh Energy Regulatory Commission Act (2003), National Energy Policy (2005), Renewable Energy Policy (2008), Sustainable and Renewable Energy Development Authority Act (2012), Action Plan for Energy Efficiency and Energy Conservation (2013), Sustainable Development Goals (2015-2030), Energy Efficiency and Conservation Master Plan up to 2030, Energy Efficiency and Conservation Rules (2016) and other relevant policies and acts.	<ul style="list-style-type: none"> <li>• To underline the land use and energy related policy in Bangladesh.</li> <li>• To recognize the energy regulatory act and action plan for energy regulation.</li> <li>• To assess the pros and cons of existing land use and energy policy in Bangladesh.</li> </ul>	Week 12 Week 13 Week 14	<ul style="list-style-type: none"> <li>• Audio-visual materials</li> <li>• Online lecturing</li> <li>• Group discussion</li> <li>• Q&amp;A session</li> <li>• Big data mining</li> </ul>	Linked with CLO 7
<b>Review Class</b>	<ul style="list-style-type: none"> <li>• To make an overview</li> </ul>	Week 15	<ul style="list-style-type: none"> <li>• Audio-visual materials</li> <li>• Online lecturing</li> <li>• Q&amp;A session</li> </ul>	Linked with all CLOs
<b>Final Assessment</b>		Week 16		

#### Part C- Assessment and Evaluation

- Online assessment and evaluation pattern of the University will be followed.

#### Part D- Learning materials

- Land Use and Energy Module
- Audio-visual materials ([www.pstu.ac.bd](http://www.pstu.ac.bd), <http://beck-erasmus.com>).

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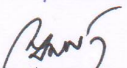
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