

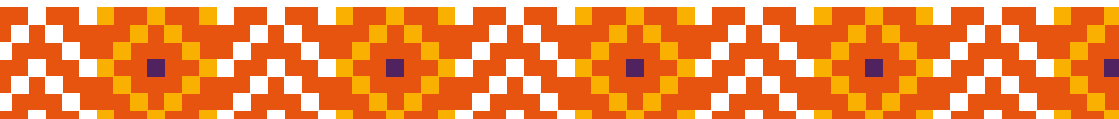


# BSc Honours in Energy Studies (H2006Q)

Department of Geography, Environmental Management & Energy Studies

Faculty of Science

**Our Future  
Reimagined**







The BSc Honours in Energy Studies is targeted at energy professionals looking to expand their knowledge and advance their careers, and at full-time students who have just finished their undergraduate degree and want to work in the energy industry. The course focuses on the South African energy system. The content is presented as a combination of online self-study and at lectures. The course content is supplemented with expert guest lectures and excursions to energy facilities. Lecturers have experience working in the energy industry.

### Programme Structure

The BSc Honours in Energy Studies can be pursued on a full-time basis (2 semesters) or part-time basis (4 semesters). The programme comprises six modules:

1. Energy Economics
2. Energy Technology
3. Energy Modelling
4. The International, Geographical and Political Aspects of Energy
5. Energy Policy Formulation
6. Research Project





## Module Overview

|   | Credits | Purpose  | Assessment  |
|---|---------|--|---|
| Energy Policy Formulation (ENS8X01)                                   | 20      | Formulate energy policy, discussing South African energy policies and regulations, and compare them with international practices.    | Two assignments and an exam   |
| International, Geographical and Political Aspects of Energy (ENS8X02) | 20      | Examine global energy resources, transport structures, and international constraints affecting global energy trade                   | A mid-year test, two written assignments, one oral assignment and an exam |
| Energy Economics (ENS8X03)  | 30      | Examine economic relationships and concepts pertinent to energy supply and demand, focusing on South African energy economics        | A mid-year test, two assignments and an exam                              |
| Energy Technology (ENS8X04)   | 30      | Technical, environmental, social and economic aspects of energy technologies   | A mid-year test, two written assignments, one oral assignment and an exam |
| Energy Modelling (ENS8X05)  | 20      | Principles and applications of energy system modelling; spreadsheet models; system dynamic modelling, marginal abatement cost curves | Three practical assignments and an exam                                   |
| Research Project in Energy (ENS8X00)                                  | 30      | Guides students in research principles, data collection, and writing skills  | A written research report   |





## Application Procedure

Applications are submitted via the University of Johannesburg's online application portal: <https://www.uj.ac.za/admission-aid/postgraduate/> between April and October of the preceeding year. Required documents include an academic transcript, cover letter (optional), and CV (optional). The departmental selection panel considers applications competitively. Conditional acceptance is not a guarantee of a place in the course.

## Admission Requirements

- A relevant Bachelor's degree in Science, Commerce, Humanities, or an equivalent BTech degree.
- A minimum result of 60% for the major modules in the final year of the undergraduate degree. Preference is given to applicants with higher averages.
- Relevant experience in the energy industry is an advantage.
- Admission to the programme requires the approval of the Programme Co-ordinator of Energy Studies and the Head of Department of Geography, Environmental Management and Energy Studies.

## Contact information

### Academic queries:

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Energy Studies course coordinator

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Science Faculty officer

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### **What current and past Energy Studies Honours students have said about the programme:**

*The UJ Energy Studies programme offers a multifaceted approach to energy strategy and security. It is practical in its approach, yet comprehensive in its outlook. Broad in content and also incorporating the energy transition – it objectively analyses biogas, coal, natural gas, hydrogen, hydropower, nuclear, solar, wind and all other forms of power generation. It combines technology, modelling, energy economics and policy in an integrated manner – linking them to the generation, transmission and distribution of power. Structured to accommodate both full-time students and working professionals – it is African in its relevance, yet global in its insights.* **Isaac Nkama, PG Dip, MBA, MSc, MSc, MPhil, CM (SA), Founder – Foresight Africa Consulting**

*Very enlightening, focuses on current affairs not only about South Africa but also globally whilst driving students to be solution-orientated. The lecturers are the subjects' pioneers and pillars who are passionate and push us to think outside the box, at the same time giving us direction and hope. You all rock.* **Highly motivated BSc Hons Energy Studies student - Charlotte Tsumaki**

*Through the Energy Studies course, I came face to face with the inescapable reality that energy is not merely a commodity but a driving force shaping economies, influencing geopolitics, and determining social equity. I got a holistic understanding of diverse energy systems and their impact on global interconnectedness. During our classes, there was open dialogue and collaborative input involving engineers, geographers, policy-makers, environmental consultants, chemists, and economists. I cannot leave out the wonderful guest lectures from prestigious companies, NGOs and state-owned entities that have very insightful presentations.* **Tshepo Masuoane**







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