

Programa de Atividades

Curso

Emulsions and Demulsifiers in the Oil Industry

Ministrante

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Alvarez**

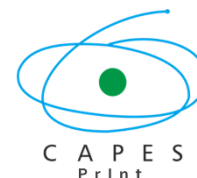
Realização



Apoio



Financiamento



Informações gerais

- As aulas teóricas e práticas são independentes.
- Terão prioridade nas aulas práticas alunos do PPEQ, PRH36 e IC's vinculados aos laboratórios destes programas.
- Dúvidas e informações através do e-mail prh36@ufba.br
- Para receber o certificado, deverá ter participação mínima de 75% do curso.

Cronograma

Datas e horários das aulas teóricas:

- 20 de fevereiro de 2024 / 14:00 às 16:00h (2h).
- 21 de fevereiro de 2024 / 08:30 às 12:30h (4h).
- 23 de fevereiro de 2024 / 08:30 às 12:30h (4h).
- 26 de fevereiro de 2024 / 08:30 às 12:30h (4h).
- 28 de fevereiro de 2024 / 08:30 às 12:30h (4h).
- 01 de março de 2024 / 08:00 às 10:00h (2h).

Datas e horários das aulas práticas:

- 20 de fevereiro de 2024 / 16:00 às 18:00h (2h).
- 21 de fevereiro de 2024 / 14:00 às 18:00h (4h).
- 28 de fevereiro de 2024 / 14:00 às 18:00h (4h).

Programa

Aulas teóricas

- ♦ 20 de fevereiro de 2024 / 14:00 às 16:00h (2h)
 1. Introduction to Petroleum Emulsions
 - 1.1. Definition and Types of Emulsions
 - 1.2. Formation of Petroleum Emulsions
 - 1.3. Petroleum Oil Emulsion Types
 - 1.4. Role of Emulsions in Petroleum Extraction and Refining
 2. The Science of Emulsions
 - 2.1. Mechanisms and Factors Influencing Emulsion Formation
 - 2.2. Factors Influencing Emulsion Stability
 - 2.3. Physicochemical Properties of Petroleum Oil Emulsions
 - 2.4. Characterization of Oilfield Emulsions
 - 2.5. Emulsion Formation in Different Oilfields
- ♦ 21 de fevereiro de 2024 / 08:30 às 12:30h (4h)
 3. Surfactants
 - 3.1. Anionic surfactants
 - 3.2. Cationic Surfactants
 - 3.3. Amphoteric or Zwitterionic Surfactants

- 3.4. Nonionic surfactants
- 3.5. Practical Considerations
- 4. Demulsifiers in the Oil Industry
 - 4.1. Demulsification Methods
 - 4.2. The Role of Demulsifiers
 - 4.3. Introduction to Demulsifiers
 - 4.4. Overview of Surfactants and Demulsifiers
 - 4.5. Chemicals to Break the Emulsions
 - 4.6. Emerging Demulsification Technologies

♦ 23 de fevereiro de 2024 / 08:30 às 12:30h (4h)

- 5. Crossing Out Demulsifiers
 - 5.1. Exact Cross-Out
 - 5.2. Functional Cross-Out
 - 5.3. Implementing Cross-Outs
- 6. Challenges and Solutions in Demulsification
 - 6.1. Challenges in Demulsification
 - 6.2. Handling Emulsions in Harsh Environments
 - 6.3. Treatment of High Viscosity and Heavy Oil Emulsion
 - 6.4. Cost-Effective Management of Emulsion-Related Issues
 - 6.5. Application of Demulsifiers in Oil Recovery
 - 6.6. Case Studies: Problem Solving in the Field

♦ 26 de fevereiro de 2024 / 08:30 às 12:30h (4h)

- 7. Design and Selection of Demulsifiers
 - 7.1. Criteria for Demulsifier Selection
 - 7.2. Environmental Considerations in Demulsifier Usage
 - 7.3. Characteristics of Raw Demulsifiers
 - 7.4. Demulsifier Blend
 - 7.5. Strategies for Demulsifier Blend Design
- 8. Technological Advances in Demulsification
 - 8.1. Innovations in Emulsion Science
 - 8.2. Recent Developments in Demulsifier Technology
 - 8.3. Nanotechnology in Emulsion Breaking
 - 8.4. Future of Demulsifiers: Trends and Potential
 - 8.5. Emerging Challenges in Oil Emulsion Management
 - 8.6. Collaboration and Interdisciplinary Research Opportunities

♦ 28 de fevereiro de 2024 / 08:30 às 12:30h (4h)

- 9. Environmental and Regulatory Aspects
 - 9.1. Environmental Impact of Emulsions and Demulsifiers
 - 9.2. Regulatory Framework and Compliance Governing Emulsion Treatment

- 9.3. Sustainable Practices in Demulsification
- 9.4. Future Trends in Regulatory Compliance
- 10. Economic Aspects and Market Analysis
- 10.1. Cost Analysis of Demulsification Processes
- 10.2. Market Trends in Demulsifier Products
- 10.3. Supply Chain and Industry Dynamics

♦ 01 de março de 2024 / 08:00 às 10:00h (2h).

11. Conclusions

- 11.1. Summary of Demulsifiers Key Findings
- 11.2. Future Directions in Research and Industry of Demulsifiers

Aulas práticas

♦ 20 de fevereiro de 2024 / 16:00 às 18:00h (2h)

Experiment 1: Desulmidifier characterization

♦ 21 de fevereiro de 2024 / 14:00 às 18:00h (4h)

Experiment 2: Emulsion characterization

♦ 28 de fevereiro de 2024 / 14:00 às 18:00h (4h)

Experiment 3: Jar test