Vaccine Bioprocessing (BENG0028)

Description
This course seeks to instruct in the various stages of vaccine development and commercialisation. As many vaccines are administered to healthy individuals, the regulatory requirements shape development unlike any other biopharmaceutical. Students will learn about the historical importance of early vaccines, the modification to the 'regulatory lock,' and process development challenges for vaccine manufacture.

Intended learning outcomes
Upon completion of the course, a student should be able to:

- Identify active and passive immune therapies
- Understand the regulatory burden for vaccine manufacture
- Distinguish between process choices for bacterial and viral vaccines
- Understand antigen design
- Distinguish between the multiple methods of action for an adjuvant
- Appreciate vaccine development within a closed 'artificial' market
- Make cost bases analyses on process changes
- Understand 'production at risk'

Key information

<table>
<thead>
<tr>
<th>Year</th>
<th>2018/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit value</td>
<td>15 (150 study hours)</td>
</tr>
<tr>
<td>Delivery</td>
<td>UG L6, Campus-based</td>
</tr>
<tr>
<td>Reading List</td>
<td><a href="ucl.ac.uk">View on UCL website</a></td>
</tr>
<tr>
<td>Tutor</td>
<td>Prof Tarit Mukhopadhyay</td>
</tr>
<tr>
<td>Term</td>
<td>Term 1</td>
</tr>
<tr>
<td>Timetable</td>
<td><a href="ucl.ac.uk">View on UCL website</a></td>
</tr>
</tbody>
</table>

Assessment

- Coursework: 100%
- Coursework: 30%
- Written examination (main exam period): 70%

Find out more

For more information about the department, programmes, relevant open days and to browse other modules, visit ucl.ac.uk
Vaccine Bioprocessing (BENG0028)

Description
This course seeks to instruct in the various stages of vaccine development and commercialisation. As many vaccines are administered to healthy individuals, the regulatory requirements shape development unlike any other biopharmaceutical. Students will learn about the historical importance of early vaccines, the modification to the 'regulatory lock,' and process development challenges for vaccine manufacture.

Intended learning outcomes
Upon completion of the course, a student should be able to:

- Identify active and passive immune therapies
- Understand the regulatory burden for vaccine manufacture
- Distinguish between process choices for bacterial and viral vaccines
- Understand antigen design
- Distinguish between the multiple methods of action for an adjuvant
- Appreciate vaccine development within a closed 'artificial' market
- Make cost bases analyses on process changes
- Understand 'production at risk'

Key information

<table>
<thead>
<tr>
<th>Key information</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2018/19</td>
</tr>
<tr>
<td>Credit value</td>
<td>15 (150 study hours)</td>
</tr>
<tr>
<td>Delivery</td>
<td>PGT L7, Campus-based</td>
</tr>
<tr>
<td>Reading List</td>
<td>View on UCL website</td>
</tr>
<tr>
<td>Tutor</td>
<td>Prof Tarit Mukhopadhyay</td>
</tr>
<tr>
<td>Term</td>
<td>Term 1</td>
</tr>
<tr>
<td>Timetable</td>
<td>View on UCL website</td>
</tr>
</tbody>
</table>

Assessment

- Coursework: 30%
- Coursework: 100%
- Written examination (main exam period): 70%

Find out more
For more information about the department, programmes, relevant open days and to browse other modules, visit ucl.ac.uk

Disclaimer: All information correct as of December 2018. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.
Vaccine Bioprocessing (BENG0028)

Description
This course seeks to instruct in the various stages of vaccine development and commercialisation. As many vaccines are administered to healthy individuals, the regulatory requirements shape development unlike any other biopharmaceutical. Students will learn about the historical importance of early vaccines, the modification to the 'regulatory lock,' and process development challenges for vaccine manufacture.

Intended learning outcomes
Upon completion of the course, a student should be able to:

- Identify active and passive immune therapies
- Understand the regulatory burden for vaccine manufacture
- Distinguish between process choices for bacterial and viral vaccines
- Understand antigen design
- Distinguish between the multiple methods of action for an adjuvant
- Appreciate vaccine development within a closed 'artificial' market
- Make cost bases analyses on process changes
- Understand 'production at risk'

Key information

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2018/19</td>
</tr>
<tr>
<td>Credit value</td>
<td>15 (150 study hours)</td>
</tr>
<tr>
<td>Delivery</td>
<td>UGM L7, Campus-based</td>
</tr>
<tr>
<td>Reading List</td>
<td>View on UCL website</td>
</tr>
<tr>
<td>Tutor</td>
<td>Prof Tarit Mukhopadhyay</td>
</tr>
<tr>
<td>Term</td>
<td>Term 1</td>
</tr>
<tr>
<td>Timetable</td>
<td>View on UCL website</td>
</tr>
</tbody>
</table>

Assessment

- Written examination (main exam period): 70%
- Coursework: 30%

Find out more
For more information about the department, programmes, relevant open days and to browse other modules, visit ucl.ac.uk

Disclaimer: All information correct as of December 2018. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.