



## **GRADUATE CERTIFICATE IN HEALTH PRODUCTS REGULATION**

### **GMS5011: Fundamentals of Pharmaceutical Regulation**

*7 September 2020 – 11 September 2020*

**Venue:** Zoom

### **WORKSHOP PROGRAMME**

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#### **Learning outcomes**

- Interpret the health products regulatory landscape, the interaction among the regulatory stakeholders and the implication on regulatory decision-making
- Compare between the similarities and differences between regulations and guidelines in marketing authorization of pharmaceutical products and medical devices
- Recognize and demonstrate basic principles of assessing benefit-risk ratio and regulatory decision-making for approval of pharmaceutical products and medical devices
- Evaluate and assemble the documentation required for regulatory submission and assessment, for pharmaceutical products and medical devices
- Evaluate the importance of regulatory strategy
- Identify current and future trends in health products regulations
- Examine the role of the regulatory affairs professional

## Graduate Certificate in Health Products Regulation

### GMS5011: Fundamentals of Health Products Regulation

7 – 11 September 2020

#### Day 1 – 7 September, Mon

Topic	Speaker/ Organisation
8.00am Zoom Briefing	<b>Mr Osman Bin Mohamad</b> Senior Associate Centre of Regulatory Excellence (CoRE) Duke-NUS Medical School
8.30am Workshop Briefing / Ice-breaker / Goalsetting	<b>Dr How Yew Meng</b> Senior Associate CoRE, Duke-NUS Medical School
8.50am Welcome Graduate Certificate Students	<b>Prof John Lim</b> Executive Director Centre of Regulatory Excellence (CoRE) Duke-NUS Medical School
<b>Session 1: Health Products Regulatory Overview and Role of Regulatory Professional</b>	
9.00am <b>Health products regulatory landscape</b> <ul style="list-style-type: none"> <li>Provide broad overview of how regulations are evolving in the context of changing global landscape</li> </ul>	
10.00am <b>Refreshment Break</b>	
10.30am <b>Introduction to pharmaceutical regulations</b> <ul style="list-style-type: none"> <li>To understand the purpose of regulatory framework in ensuring pharmaceutical product SEQ</li> <li>Regulatory decision-making across PLC</li> </ul>	
11.30am <b>Pharmaceutical regulations in the context of healthcare</b> <ul style="list-style-type: none"> <li>To understand the role of pharmaceutical regulations and its contribution to the healthcare environment.</li> </ul>	
12.30pm <b>Lunch</b>	
1.30pm <b>Knowledge-Check 1</b>	<b>Understanding of pharmaceutical regulations</b>
2.00pm <b>Introduction to medical device regulations</b> <ul style="list-style-type: none"> <li>Overview of MD regulations</li> <li>US FDA 510(k)</li> <li>EU CE-mark</li> <li>ASEAN</li> </ul>	
2.45pm <b>Medical device regulations in the context of healthcare</b> <ul style="list-style-type: none"> <li>To understand the role of medical device regulations and its contribution to the healthcare environment.</li> </ul>	
3.30pm <b>Refreshment Break</b>	
4.00pm <b>Knowledge-Check 2</b>	<b>Understanding of MD regulations</b>
4.30pm <b>Role of regulatory professionals</b> <ul style="list-style-type: none"> <li>Role of regulatory professional in the current landscape</li> <li>Changing roles and skill sets</li> </ul>	<b>Dr How Yew Meng</b> Senior Associate CoRE, Duke-NUS Medical School
5.30pm <b>End</b>	

## Day 2 – 8 September, Tue

	Topic	Speaker/ Organisation
8.30am	<b>Individual and Group assessment I</b>	
<b>Session 2: Health Products: Ensuring Quality, Safety, Efficacy</b>		
9.30am	<b>Manufacturing and inspection process pharm products</b> <ul style="list-style-type: none"> <li>• Introduction to CMC standards</li> <li>• Drugs + Biologics CMC differences</li> </ul>	
10.15am	<b>Refreshment Break</b>	
10.45pm	<b>Manufacturing and inspection process MD (ISO 13485)</b> <ul style="list-style-type: none"> <li>• Introduction to QMS for MD</li> <li>• <b>Relevance of ISO 13485 to regulations</b></li> </ul>	
11.30am	<b>Knowledge-Check 3</b>	<b>Differences in pharma and MD manufacturing</b>
12.00pm	<b>Lunch</b>	
1.00pm	<b>Non-clinical trials for pharmaceutical products and medical devices: Similarities and differences</b> <ul style="list-style-type: none"> <li>• Understand the basis for differences in Pre/Non-CT requirements between pharm and MD</li> </ul>	
2.00pm	<b>Clinical trials for pharmaceutical products and medical devices: Similarities and differences</b> <ul style="list-style-type: none"> <li>• Understand the basis for differences in CT requirements between pharm and MD</li> </ul>	
3.00pm	<b>Refreshment Break</b>	
3.30pm	<b>Practicum 1a</b>	
4.30pm	<b>Practicum 1b</b>	
5.30pm	<b>End</b>	

## Day 3 – 9 September, Wed

	Topic	Speaker/ Organisation
8.30am	Individual and Group assessment II	
<b>Session 3: Health Products Regulatory Process</b>		
9.30am	<b>Market authorisation application (pharmaceutical)</b> <ul style="list-style-type: none"> <li>Requirements for MAA submission and review in select countries</li> <li>ICH CTD submission requirements</li> </ul>	
10.30am	Refreshment Break	
11.00am	<b>Market authorisation application (MD)</b> <ul style="list-style-type: none"> <li>Requirements for MAA submission and review in select countries</li> <li>ASEAN CSDT for GSP</li> </ul>	
12.00pm	Knowledge-check 4	Differences in between pharma and MD MAA process
12.30pm	Lunch	
1.30pm	<b>Regulatory requirements for regulatory decision making: Benefit-risk analysis</b> <ul style="list-style-type: none"> <li>Benefit-risk assessment for regulatory decision making</li> </ul>	
2.30pm	Practicum 2a	
3.30pm	Refreshment Break	
3.45pm	Practicum 2a Cont'd	
4.15pm	Practicum 2b	
5.30pm	End	

## Day 4 – 25 June, Thurs

	Topic	Speaker/ Organisation
8.30am	<b>Individual and Group Assessment III</b>	
9.30am	<b>Vigilance and Post-marketing for pharmaceutical products</b> <ul style="list-style-type: none"> <li>Regulatory requirements for post-marketing activities</li> <li>Introduce PV, RMP, enforcement, surveillance</li> <li></li> </ul>	
10.30am	<b>Refreshment Break</b>	
11.00am	<b>Vigilance and Post-marketing for medical devices</b> <ul style="list-style-type: none"> <li>MD post-marketing activities under the context of Risk management MD (ISO 14971)</li> </ul>	
12.00pm	<b>Knowledge-check 5</b>	<b>Differences between pharma and MD post-marketing activities</b>
12.30pm	<b>Lunch</b>	
<b>Session 4: Health Products Strategy</b>		
1.30pm	<b>Commercialization strategy of pharmaceutical products</b> <ul style="list-style-type: none"> <li>Regulatory activities in the context of commercialization of pharmaceutical product</li> </ul>	
2.30pm	<b>Commercialization strategy of medical devices</b> <ul style="list-style-type: none"> <li>Understand regulatory activities in the context of commercialization of Medical Devices.</li> </ul>	
3.00pm	<b>Refreshment Break</b>	
3.30pm	<b>Practicum 3a</b>	
4.30pm	<b>Practicum 3b</b>	
5.30pm	<b>End</b>	

## Day 5 – 26 June, Fri

	Topic	Speaker/ Organisation
8.30am	End-of-Module (EOM) Assessment	
9.30am	Review of EOM Questions	
10.30am	Break	
<b>Session 5: Trends in Health Product Regulations</b>		
11.00am	<b>Good Regulatory Management and Professional Development</b> <ul style="list-style-type: none"> <li>Continuing development for regulatory professionals</li> </ul>	
11.45am	<b>Trends in MD Regulation<sup>1</sup></b> <ul style="list-style-type: none"> <li>Digitalization, wearables, combination products, robotics, AI, 3D printing</li> </ul>	
12.30pm	Photo-taking with Faculty and Participants	<b>CoRE Team</b>
12.40pm	Lunch	
1.30pm	<b>Trends in Pharmaceutical Regulation<sup>2</sup></b> <ul style="list-style-type: none"> <li>RWE, rolling subs, advanced therapies, digital therapies</li> </ul>	
2.15pm	<b>Global and Regional Regulatory Platforms<sup>3</sup></b> <ul style="list-style-type: none"> <li>Regulatory reliance, convergence, harmonization, work-sharing</li> </ul>	
3.00pm	Break	
3.30pm	<b>Panel Session: Accelerating innovative developments of therapeutic technologies of health products</b> Q&A with Industry and Regulators	
4.30pm	<b>Towards Regulatory Excellence</b>	<b>Prof John Lim</b> Executive Director Centre of Regulatory Excellence (CoRE) Duke-NUS Medical School
5.15pm	<b>Graduate Certificate Workshop Conclusion</b>	<b>A/Prof Silke Vogel</b> Deputy Director, CoRE Senior Associate Dean Graduate Studies Duke-NUS Medical School
5.30 pm	End	