

# □ Diploma in Health Informatics 2025

*Health Information Systems:  
Requirements for a Successful Design and Implementation*

Sistemas de Información en Salud:  
Requisitos para un Diseño e Implementación Exitosa

September – December 2025  
Santiago, Chile

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Introduction Module 0: Academic Staff

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Module 1 - Health Information Systems: Academic Staff

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Module 2 - Medical Documentation and Terminologies: Academic Staff

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Module 3 - Interoperability in HealthCare: Academic Staff

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## Locations/ Address

### *Heidelberg Center para América Latina*

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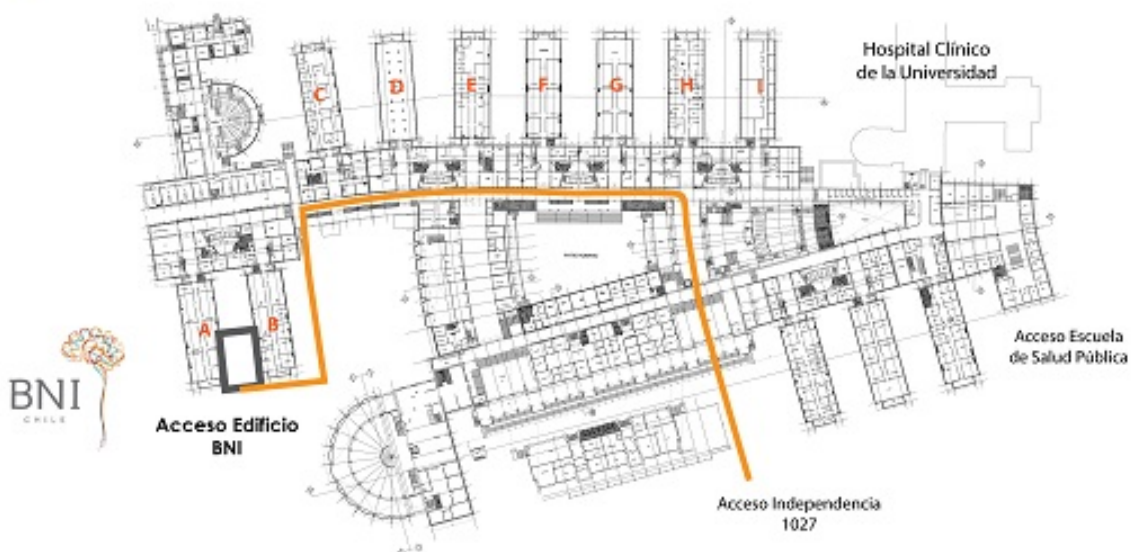
### *Facultad de Medicina Universidad de Chile*

Independencia 1027, Independencia, Santiago, Chile. Metro Hospitales.

Sala: Instituto de Neurociencia Biomédica (BNI)



## Plano Facultad de Medicina



Calendar: September – December 2025

CALENDAR 15 SEPTEMBER - 13 DECEMBER 2025								
Introduction Module 0: Academic Staff	Module 1 - Health Information Systems	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
		SEPTEMBER						
		15	16	17	18	19	20	21
		WELCOME SESSION 18:00h Sync			CHILEAN HOLIDAY	CHILEAN HOLIDAY		
		22	23	24	25	26	27	28
		R. Campos 18:00-19:30h Sync				M. Cerda 9:30-13:00h Hybrid J. I. Merino 15:00-18:30h Hybrid	E. Rojas 9:30-13:00h Hybrid J. L. Gatica 15:00-18:30h Hybrid	
		SEPTEMBER			OCTOBER			
		29	30	1	2	3	4	5
		N. Benning Async				R. Martínez 18:00-20:00h Sync	N. Benning 09:20-16:20h Sync	
		6	7	8	9	10	11	12
		N. Benning Async				N. Benning 09:20-16:20h Sync	N. Benning 09:20-16:20h Sync	CHILEAN HOLIDAY
		Module 2 - Medical Documentation and Terminologies						
		13	14	15	16	17	18	19
	M. Seitz Async		EXAMEN M1 18:00- 20:00h Sync		M. Seitz Async	M. Seitz 10:00-11:30h Sync		
20	21	22	23	24	25	26		
M. Seitz Async				M. Seitz Async L. Camus 15:00-18:30h Hybrid	M. Seitz 10:00-11:30h Sync			
OCTOBER					NOVEMBER			
27	28	29	30	31	1	2		
R. Martínez 18:00-20:00h Sync				CHILEAN HOLIDAY	CHILEAN HOLIDAY			
NOVEMBER								
3	4	5	6	7	8	9		
				L. Camus 15:00-18:30h Hybrid	E. Hebel 9:30-13:00h Hybrid E. Hebel 15:00-18:30h Hybrid			
Module 3 - Interoperability in HealthCare								
10	11	12	13	14	15	16		
R. Wettstein Async		EXAMEN M2 18:00- 20:00h Sync		R. Wettstein Async	R. Wettstein 12:00-13:30h Sync	CHILEAN HOLIDAY (Presidential Elections)		
17	18	19	20	21	22	23		
R. Wettstein Async				R. Wettstein Async	R. Wettstein 12:00-13:30h Sync			
24	25	26	27	28	29	30		
R. Wettstein Async				R. Wettstein Async	R. Wettstein 12:00-13:30h Sync			
DECEMBER								
1	2	3	4	5	6	7		
R. Martínez 18:00-20:00h Sync				F. Portilla 9:30-13:00h Sync F. Portilla 15:00-18:30h Sync	F. Portilla 9:30-13:00h Sync P. Orefice 15:00-18:30h Sync			
8	9	10	11	12	13	14		
		EXAMEN M3 18:00- 20:00h Sync			CLOSING SESSION 10:00-13:00h Hybrid	CHILEAN HOLIDAY (Presidential Elections)		

## Module 1 - Health Information Systems

### Week 1:

Monday, 15 September

0-1	S. Härtel	<b>Synchronous 18:00-20:00h</b>
	S. de la Fuente	<b>Welcome Session.</b>
		<i>General information and students' presentation.</i>

### Week 2:

Monday, 22 September

0-2	R. Campos	<b>Synchronous 18:00-20:00h</b>
		<b>Digital Transformation in Healthcare.</b>
		<i>RSDUE Case: Introduction to digital transformation in health from State Universities.</i>

Friday, 26 September

1-1	M. Cerda	<b>Hybrid 9:30-13:00h</b>
		<b>Clinical research in medical informatics.</b>
		- Image processing
		- Natural language processing
		- Clinical trials

1-2 J.I. Merino **Hybrid 15:00-18:30h**

***Change Management***

*In this class we will present the main concepts of Organizational Change Management and its role in the Implementation of information systems projects. We will review recent research data and some of the best practices of the Change Management discipline applied to a case. Participants will have the information to make their own basic change management plan.*

Saturday, 27 September

1-3 E. Rojas **Hybrid 9:30-13:00h**

*We will learn about telemedicine: fundamentals and basic concepts.*

1-4 J. L. Gatica **Hybrid 15:00-18:30h**

*The students will learn about telemedicine in isolated locations and the experience of Hospital Digital: Implementation of Telemedicine in dermatology.*

**Week 3:**

Monday, 29 September

1-5 N. Benning **Asynchronous**

*Students will be able to know A3/Kaizen: change for the better and define problems and solving them using small steps of everyday improvement through the scientific method.*

Friday, 3 October

0-2 R. Martínez **Synchronous 18:00-20:00h**

***Main Tools to initiate Digital Transformation in Healthcare.***

*The students will be able to identify and use different tools to transform healthcare.*



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## Saturday, 4 October

1-6

N. Benning

**Hybrid 9:20-16:20h**

*We will learn about the global and regional context in the management of Health IT projects, basic components of project management, and different roles of a project.*

*The stages of a project and associated tasks, Types of representation of the organizational structure of a project.*

## Week 4:

## Monday, 6 October

1-7

N. Benning

**Asynchronous**

*Students will be able to know A3/Kaizen: change for the better and define problems and solving them using small steps of everyday improvement through the scientific method.*

## Friday, 10 October

1-8

N. Benning

**Hybrid 9:20-16:20h**

*Participants will learn about: Planification stage: visualization of the project timeline. Definition of objectives (goals) of the project and how to reach them.*

*Definition of objectives based on S.M.A.R.T criteria. How to establish the contract.*

*Deliverable of the project. Final reports of each stage. Characteristics of the effective meetings.*

## Saturday, 11 October

1-9

N. Benning

**Hybrid 9:20-16:20h**

*Participants will learn about: Techniques of Agile Project Management.*

*Scrum as a methodology to support the work of software development teams.*

*Presentation of students (seminars 'of medical case studies').*

Module 2 - Medical Documentation and Terminologies

**Week 5:**

Monday, 13 October

2-1

M. Seitz

**Asynchronous**

***Principles of medical documentation***

*Students shall learn about clinical treatment pathways, objectives, and relevance of medical documentation as well as documentation systems and the basic vocabulary of medical documentation.*

***Medical classification systems***

*Students will learn about the difference between classifications and nomenclatures, the most important properties of classifications and nomenclatures, the most important medical classifications and nomenclatures, the meaning of precision and recall.*

Wednesday, 15 October

Ex

S. de la  
Fuente

**Synchronous 18:00-20:00h**

***Examen I***

Friday, 17 October

2-2

M. Seitz

**Asynchronous**

***Patient records***

*The participants get an overall view of the different kinds of patient records and the stored data. The participants will learn about paper-based records, electronic patient records, shared patient records and health records. For each patient record a SWOT analysis (strengths, weaknesses, opportunities, and threats) will be performed.*

Saturday, 18 October

2-3

M. Seitz

**Synchronous 10:00-11:30h**

*Short summary of this week's topics (Medical documentation, patient records and medical classification systems). Discussion of exercises and questions.*

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## Week 6:

Monday, 20 October

2-4

M. Seitz

**Asynchronous**

### ***Interaction of clinical decision support and documentation***

*Students will learn that clinical decision support requires medical documentation and, conversely, that decision support enhances and complements documentation.*

*Components of a Clinical Decision Support System (CDSS), Rule Based Reasoning (RBR), Case Based Reasoning (CBR).*

Friday, 24 October

2-5

M. Seitz

**Asynchronous**

### ***Security of medical data***

*Students will learn about basic security criteria for handling (medical) data, security terms, possibilities of attack and how to deal with them, encryption, authentication, tracking and data security aspects in hospitals.*

2-6

L. Camus

**Hybrid 15:00-18:30h**

*We will talk about the purpose and applicability of Diagnosis Related Groups as a clinical management tool, the structure, and metrics of DRGs and participate in a Workshop on interpretation of performance indicators.*

Saturday, 25 October

2-7

M. Seitz

**Synchronous 10:00-11:30h**

Short summary of this week's topics (**Interaction of clinical decision support and documentation, Security of medical data**).

Discussion of exercises.

**Questions, Feedback.**

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**Week 7:**

Monday, 27 October

0-3 R. Martínez **Synchronous 18:00-20:00h**

***Health Information Systems: Main concepts.***

*The main concepts and modules of health information systems, both administrative and clinical, will be reviewed.*

**Week 8:**

Friday, 7 November

2-8 L. Camus **Hybrid 15:00-18:30h**

*Purpose and applicability of DRGs as a payment mechanism in the hospital setting.*

*Relevance of Data Quality and Use of Classification System of diagnoses and procedures (ICD10 and ICD 9 MC) for the grouping of cases by DRG.*

*Workshop on clinical case analysis and DRG payment estimation.*

Saturday, 8 November

2-9 E. Hebel **Hybrid 9:30-13:00h**

***Representation of Medical Knowledge and Clinical Terminologies***

*Students will be able to recognize the mechanisms by which medical knowledge is represented through health information systems and their impact on the transmission of information for clinical and continuity of care use.*

2-10 E. Hebel **Hybrid 15:00-18:30h**

***Quality Assessment through Structured Clinical Information.***

*Students will be able to know and understand the mechanisms available for quality management in health facilities, through the information generated and collected through health information systems.*

## Module 3 - Interoperability in HealthCare

### **Week 9:**

Monday, 10 November

3-1

R. Wettstein    **Asynchronous**

#### ***Introduction to eHealth & IHE, IHE Identity Management. (I)***

*The participants will learn about the fundamentals of eHealth and the basic concepts of Integrating the Healthcare Enterprise (IHE). Furthermore, we will look at the first group of IHE profiles in the IT-infrastructure domain regarding identity management.*

Wednesday, 12 November

Ex

S. de la  
Fuente

**Synchronous 18:00-20:00h**

#### ***Examen II***

Friday, 14 November

3-2

R. Wettstein    **Asynchronous**

#### ***Introduction to eHealth & IHE, IHE Identity Management. (II)***

*The participants will learn about the fundamentals of eHealth and the basic concepts of Integrating the Healthcare Enterprise (IHE). Furthermore, we will look at the first group of IHE profiles in the IT-infrastructure domain regarding identity management.*

Saturday, 15 November

3-3

R.  
Wettstein

**Synchronous 12:00-13:30h**

#### ***Introduction to eHealth & IHE, IHE Identity Management.***

*The participants will learn about the fundamentals of eHealth and the basic concepts of Integrating the Healthcare Enterprise (IHE). Furthermore, we will look at the first group of IHE profiles in the IT-infrastructure domain regarding identity management.*

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**Week 10:**

**Monday, 17 November**

**3-4**

R. Wettstein    **Asynchronous**

***IHE Document Sharing, IHE Privacy (I)***

*We will talk about the second group of IHE profiles regarding document sharing between organizations and how to integrate these profiles with the ones about identity management. Additionally, the participants will learn about securing IHE infrastructures using use-case dependent IHE privacy profiles.*

**Friday, 21 November**

**3-5**

R. Wettstein    **Asynchronous**

***IHE Document Sharing, IHE Privacy (II)***

*We will talk about the second group of IHE profiles regarding document sharing between organizations and how to integrate these profiles with the ones about identity management. Additionally, the participants will learn about securing IHE infrastructures using use-case dependent IHE privacy profiles.*

**Saturday, 22 November**

**3-6**

R. Wettstein    **Synchronous 12:00-13:30h**

***IHE Document Sharing, IHE Privacy***

*We will talk about the second group of IHE profiles regarding document sharing between organizations and how to integrate these profiles with the ones about identity management. Additionally, the participants will learn about securing IHE infrastructures using use-case dependent IHE privacy profiles.*

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## **Week 11:**

**Monday, 24 November**

**3-7**

R. Wettstein    **Asynchronous**

### ***IHE Workflow, Summary & Questions (I)***

*We will look at different possibilities to define workflows in hospital environments. Finally, we will reconcile all considered the IHE profiles, answer open questions and prepare for the final exam.*

**Friday, 28 November**

**3-8**

R. Wettstein    **Asynchronous**

### ***IHE Workflow, Summary & Questions (II)***

*We will look at different possibilities to define workflows in hospital environments. Finally, we will reconcile all considered the IHE profiles, answer open questions and prepare for the final exam.*

**Saturday, 29 November**

**3-9**

R. Wettstein    **Synchronous 12:00-13:30h**

### ***IHE Workflow, Summary & Questions***

*We will look at different possibilities to define workflows in hospital environments. Finally, we will reconcile all considered the IHE profiles, answer open questions and prepare for the final exam.*

## **Week 12:**

**Monday, 1 December**

**0-4**

R. Martínez    **Synchronous 18:00-20:00h**

### ***Health Information Systems: local market and assessment.***

*The students will be able to identify common challenges during the assessment of health information systems and basic characteristics of the local market.*

Friday, 5 December

**3-10** F. Portilla **Synchronous 9:30-13.00h**

***Syntactic interoperability.***

*The participants will learn about HL7 V2: fundamentals, messaging, tools, together with hands on experiences; HL7 CDA: fundamentals, clinical documents, tools, hands on experiences; HL7 FHIR: fundamentals, resources, tools, hands on experience.*

**3-11** F. Portilla **Synchronous 15:00-18.30h**

***Semantic interoperability.***

*The students will be able to learn about LOINC: fundamentals, search engines and uses. SNOMED CT: fundamentals, search engines, uses; Terminology Services: fundamentals, use cases, FHIR and ST and experience.*

Saturday, 6 December

**3-12** F. Portilla **Synchronous 9:30-13:00h**

***Architectures for health interoperability***

*The participants will learn about: IHE profiles, IHE and FHIR. National and regional interoperability experiences and Integration of biomedical devices.*

**3-13** P. Orefice **Synchronous 15:00-18.30h**

***Architectures for health interoperability***

*The participants will learn about digital health strategies in the region and the case of Uruguay.*

**Week 13:**

Wednesday, 10 December

**Ex** S. de la Fuente **Synchronous 18:00-20:00h**

***Examen III***



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Saturday, 13 December



S. Härtel

**Hybrid 10:00-13:00h**

*Closing Session*