



Master Intelligent Adaptive Systems
Course Catalog Winter Semester 2014/15 – as of September 1st, 2014

Please note the current dates of lectures and exams in STiNE.
<http://www.info.stine.uni-hamburg.de/>

Lecture Period: 13.10.2014 – 31.01.2015
Christmas Holidays: 21.12.2014 – 04.01.2015

Registration periods in STiNE

Registration period for modules and courses:

Monday 01.09.2014, 9 am – Thursday 18.09.2014, 1 pm

Procedure: The seminar/lecture/exercise seats will be allocated at the end of the registration periods via STiNE ranking.

Correction period: Monday 13.10.2014, 9 am - Thursday 23.10.2014, 1 pm

Procedure: „first come – first served“ (only allocation for unsold seats!).

→ Always register within the registration period, since you might not get any seat in the correction period or only to study activities no one wanted to attend

Please take care that you fully register for:

- a) Module
- b) Lecture(s)
- c) Exam(s)

If there are problems with registration in STiNE log into STiNE and send a request through support form.

Please note the current dates of lectures in STiNE and in the online public course catalog (“Veranstaltungssuche” → choose WiSe 2014/15 → enter Module-Nr., LV-Code, Title of the Lecture or Name of the Lecturer).

<https://www.stine.uni-hamburg.de/>

In the public course catalogue you will also find commentaries and detailed descriptions of the individual lectures.

If there are questions concerning your study program, study counseling or examinations refer to the Academic Office Informatics → <http://www.inf.uni-hamburg.de/en/studies/orga/stb.html>

IAS-Website: <http://www.inf.uni-hamburg.de/de/studies/master/ias.html>

Winter Semester 2014/15: 1st Semester M.Sc. Intelligent Adaptive Systems

Core Modules		
InfM-SWA	Software Architecture <i>(Softwarearchitektur)</i>	64-426 Lecture Software Architecture <i>(Vorlesung Softwarearchitektur)</i> 64-427 Integrated Seminar <i>(Integriertes Seminar)</i>
InfM-BAI	Bio-Inspired Artificial Intelligence	64-275 Lecture Bio-Inspired Artificial Intelligence 64-276 Seminar Bio-Inspired Artificial Intelligence
InfM-IR	Intelligent Robotics <i>(Intelligente Roboter)</i>	64-424 Lecture Intelligent Robotics <i>(Vorlesung Intelligente Roboter)</i> 64-425 Integrated Seminar <i>(Integriertes Seminar)</i>
Focus Option		
InfM-BV 1	Image Processing I <i>(Bildverarbeitung I)</i>	64-420 Lecture Computer Vision I
InfM-WV (Replaces InfM-WV 1)	Knowledge Processing <i>(Wissensverarbeitung)</i>	64-414 Knowledge Representation <i>(Vorlesung Wissensrepräsentation)</i> 64-415 Integrated Seminar Knowledge Representation <i>(Integriertes Seminar)</i>
Extension Option		
InfM-EAM (Replaces InfM-SWOE)	Enterprise Architecture Management	64-428 Lecture Enterprise Architecture Management 64-429 Integrated Seminar Enterprise Architecture Management
InfM-SAMW	Systemanalytic Modelling <i>(Systematische Modellierungsmethoden und -werkzeuge)</i>	64-432 Lecture System Analytical Modelling Methods and Tools <i>(Vorlesung Systematische Modellierungsmethoden und -werkzeuge)</i> 64-433 Integrated Seminar System Analytical Modelling Methods and Tools <i>(Integriertes Seminar)</i>
InfM-IVC (Note: Lecture not in English)	Interactive Visual Computing	64-310 Lecture Interactive Visual Computing 64-311 Exercise Interactive Visual Computing
InfM-BV 1	Image Processing I <i>(Bildverarbeitung I)</i>	64-420 Lecture Computer Vision I
InfM-WV (Replaces InfM-WV 1)	Knowledge Processing <i>(Wissensverarbeitung)</i>	64-414 Knowledge Representation <i>(Vorlesung Wissensrepräsentation)</i> 64-415 Integrated Seminar Knowledge Representation <i>(Integriertes Seminar)</i>
InfM-EMSE (new module) (9 Credits)	Empirical Software Engineering	64-380 Lecture Software Requirements 64-381 Lecture Software Patterns 64-382 Seminar Software Engineering

Winter Semester 2014: 1st Semester M.Sc. Intelligent Adaptive Systems

	Monday	Tuesday	Wednesday	Thursday	Friday
8 – 10 am		64-381 Lecture Software Patterns 9:15-10 B-201 Start: 14.10.2014		64-381 Lecture Software Patterns 9:15-10 B-201 Start: 16.10.2014	
10 – 12 am	64-420 Lecture Computer Vision I 10 -12 am F-009 Start: 13.10.2014 64-380 Lecture Software Requirements 10-12 am B-201 Start: 13.10.2014	64-426 Lecture Software Architecture 10 am – 12 am B-201 Start: 14.10.2014 64-427 Integrated Seminar Software Architecture 12 – 2 pm F-534 Start: 14.10.2014	64-310 Lecture Interactive Visual Computing 10-12 am B-201 Start: 15.10.2014 64-414 Lecture Knowledge Representation 10 – 12 am D-220 Start: 15.10.2014	64-275 Lecture Bio-Inspired Artificial Intelligence 10 am - 12 am D-220 Start: 16.10.2014 Integrated Seminar Block	
12 – 2 pm	64-310 Lecture Interactive Visual Computing 12-2 pm B-201 Start: 13.10.2014		64-415 Integrated Seminar Knowledge Representation 12 – 2 pm Every 2 weeks Start: 22.10.2014 64-311 Exercise Interactive Visual Computing 12-2 pm B-201, D-010 Start: 15.10.2014 64-432 Lecture System Analytical Modelling Methods and Tools 12-1.30 pm/ 2:30-4 pm P3-07 Start: 15.10.2014 64-433 Integrated Seminar System Analytical Modelling Methods and Tools 17.12.2014 2:30-4 pm 21.01.2014 2-6 pm P3-07	64-420 Lecture Computer Vision I 12 – 2 pm F-009 Start: 16.10.2014 <i>64-382 Seminar Software Engineering 12-2 pm C-221 Start: 16.10.2014</i>	
2-4 pm	64-424/5 Lecture and Integrated Seminar Intelligent Robotics 2 – 4 pm F-334 Start: 13.10.2014	64-428 Lecture Enterprise Architecture Management 2 – 4 pm D-125 Start: 14.10.2014			
4-6 pm	64-424/5 Integrated Seminar Intelligent Robotics 4 – 6 pm F-334 Start: 13.10.2014	64-429 Integrated Seminar Enterprise Architecture Management 4 - 6 pm D-125/D-129 Start: 14.10.2014	<i>64-382 Seminar Software Engineering 4-6 pm C-221 Start: 15.10.2014</i>		
6-8 pm					

Winter Semester 2014/15: 3rd Semester M.Sc. Intelligent Adaptive Systems

Core Modules		
InfM-RM	Research Methods	64-750 Lecture Research Methods 64-751 Practical Course Research Methods
InfM-Proj	Project (<i>Projekt</i>) <u>Note:</u> Duration 1 semester	64-468/9 Master Project and Integrated Seminar Human Robot Interaction 64-451/52 Master Project and Integrated Seminar Mobile Services Lab 64-455/55a Master Project and Integrated Seminar Energy efficiency analyses for parallel computers
	Project (<i>Projekt</i>) <u>Note:</u> Duration 2 semesters	64-4450 Master Project Intelligent Robotics (Part 2) (Part 1 summer semester 2014)
Focus Option		
InfM-BV 1	Image Processing I (<i>Bildverarbeitung I</i>)	64-420 Lecture Computer Vision I
InfM-WV (Replaces InfM-WV 1)	Knowledge Processing (<i>Wissensverarbeitung</i>)	64-414 Knowledge Representation (<i>Vorlesung Wissensrepräsentation</i>) 64-415 Integrated Seminar Knowledge Representation (<i>Integriertes Seminar</i>)
InfM-LTR	Performance / Reliability Evaluation and Traffic Engineering for Computer Networks (<i>Leistungs-/Zuverlässigkeitsbewertung und Traffic-Engineering für Rechnernetze (LTR)</i>)	64-410 Lecture Performance / Reliability Evaluation and Traffic Engineering for Computer Networks (<i>Vorlesung Leistungs-/Zuverlässigkeitsbewertung und Traffic-Engineering für Rechnernetze</i>) 64-411 Integrated Seminar Performance / Reliability Evaluation and Traffic Engineering for Computer Networks (<i>Integriertes Seminar</i>)
Extension Option		
InfM-EAM (Replaces InfM-SWOE)	Enterprise Architecture Management	64-428 Lecture Enterprise Architecture Management 64-429 Integrated Seminar Enterprise Architecture Management
InfM-SAMW	Systemanalytic Modelling (<i>Systematische Modellierungsmethoden und -werkzeuge</i>)	64-432 Lecture System Analytical Modelling Methods and Tools (<i>Vorlesung Systematische Modellierungsmethoden und -werkzeuge</i>) 64-433 Integrated Seminar System Analytical Modelling Methods and Tools (<i>Integriertes Seminar</i>)
InfM-LTR	Performance / Reliability Evaluation and Traffic Engineering for Computer Networks (<i>Leistungs-/Zuverlässigkeitsbewertung und Traffic-Engineering für Rechnernetze (LTR)</i>)	64-410 Lecture Performance / Reliability Evaluation and Traffic Engineering for Computer Networks (<i>Vorlesung Leistungs-/Zuverlässigkeitsbewertung und Traffic-Engineering für Rechnernetze</i>) 64-411 Integrated Seminar Performance / Reliability Evaluation and Traffic Engineering for Computer Networks (<i>Integriertes Seminar</i>)
InfM-IVC (Note: Lecture not in English)	Interactive Visual Computing	64-310 Lecture Interactive Visual Computing 64-311 Exercise Interactive Visual Computing
InfM-BV 1	Image Processing I (<i>Bildverarbeitung I</i>)	64-420 Lecture Computer Vision I
InfM-WV (Replaces InfM-WV 1)	Knowledge Processing (<i>Wissensverarbeitung</i>)	64-414 Knowledge Representation (<i>Vorlesung Wissensrepräsentation</i>) 64-415 Integrated Seminar Knowledge Representation (<i>Integriertes Seminar</i>)
InfM-UIST (new module) (6 Credits)	User Interface	64-434 Lecture User Interface 64-435 Exercise User Interface
InfM-EMSE (new module) (9 Credits)	Empirical Software Engineering	64-380 Lecture Software Requirements 64-381 Lecture Software Patterns 64-382 Seminar Software Engineering

Winter Semester 2014: 3rd Semester M.Sc. Intelligent Adaptive Systems

	Monday	Tuesday	Wednesday	Thursday	Friday
8 – 10 am		64-381 Lecture Software Patterns 9:15-10 B-201 Start: 14.10.2014		64-381 Lecture Software Patterns 9:15-10 B-201 Start: 16.10.2014	
10 – 12 am	64-420 Lecture Computer Vision I 10 -12 am F-009 Start: 13.10.2014 64-380 Lecture Software Requirements 10-12 am B-201 Start: 13.10.2014	64-434 Exercises User Interface 10-12 am D-220 Start: 14.10.2014	64-455/55a Integrated Seminar Energy efficiency analyses for parallel computers 10-12 am DKRZ, 034 Start 15.10.2014 64-310 Lecture Interactive Visual Computing 10–12 am B-201 Start: 15.10.2014 64-414 Lecture Knowledge Representation 10 - 12 am D-220 Start: 15.10.2014	64-434 Lecture User Interface 10 -12 am D-125 Start: 16.10.2014	64-750 Lecture Research Methods 10 – 12 am F-235 Start: 17.10.2014 64-751 Practical Course Research Methods F-235 Start: 17.10.2014
12 – 2 pm	64-310 Lecture Interactive Visual Computing 12 – 2 pm B-201 Start: 13.10.2014	64-410 Lecture Performance / Reliability Evaluation and Traffic Engineering for Computer Networks 12 – 2 pm; F-635 Start: 14.10.2014	64-415 Integrated Seminar Knowledge Representation 12 - 2 pm D-220 Every 2 weeks Start: 22.10.2014 64-310 Exercises Interactive Visual Computing 12 – 2 pm B-201 Start: 15.10.2014 64-432 Lecture System Analytical Modelling Methods and Tools 12 – 1:30 pm P3-07 Start: 15.10.2014	64-420 Lecture Computer Vision I 12 -2 pm F-009 Start: 16.10.2014 64-382 Seminar Software Engineering 12-2 pm C-221 Start: 16.10.2014	
2-4 pm		64-434 Exercises User Interface 2 -4 pm D-220 Start: 14.10.2014 64-428 Lecture Enterprise Architecture Management 2 – 4 pm; D-125 Start: 14.10.2014	64-433 Integrated Seminar System Analytical Modelling Methods and Tools P3-07 17.12.2014 2:30-4 pm 21.01.2014 2-6 pm	64-468/9 Master Project and Integrated Seminar Human-Robot Interaction 2-6 pm F-534 Start: 16.10.2014 ----- 64-451/52 Master Project and Integrated Seminar Mobile Services Lab 2-6 pm D-125; P3-07 Start: 16.10.2014	64-455/55a Master Project and Integrated Seminar Energy efficiency analyses for parallel computers 2-4 pm DKRZ, 034 Start 17.10.2014
4-6 pm		64-429 Integrated Seminar Enterprise Architecture Management 4 - 6 pm D-125/D-129 Start: 14.10.2014 64-411 Integrated Seminar Performance / Reliability Evaluation and Traffic Engineering for Computer Networks 4 – 6 pm; F-635 Start: 14.10.2014 64-434 Exercises User Interface 4-6 pm F-132 Start: 14.10.2014	64-382 Seminar Software Engineering 4-6 pm C-221 Start: 15.10.2014		

Master Intelligent Adaptive Systems

1. Pflichtbereich / Core Lectures - Compulsory Modules

Modul InfM-SWA: Softwarearchitektur / Software Architecture

64-426 Lecture / Software Architecture

2h / Weekly 2h Tue 10:15–11:45 B–201 Start 14.10.2014

Matthias Riebisch

64-427 Integrated Seminar / Software Architecture

Integrated Seminar Gr. 03 (Tue. 10-12 Uhr, F-534) - English Weekly

2h Tue 12:15–13:45 F-534 Start 14.10.2014 /

Mohamed Aboubakr Mohamed Soliman

Integrated Seminar Gr. 05 Architectures for Mobile Services - English Block seminar. Details will be announced in the lecture.

Walid Maalej; Mathias Ellmann

Modul InfM-BAI: Bioinspirierte Künstliche Intelligenz / Bio-Inspired Artificial Intelligence

64-275 Lecture Bio-Inspired Artificial Intelligence

2h / Weekly 2h Thurs. 10:15–11:45 D–220 Start 16.10.2014

Stefan Wermter

64-276 Seminar Bio-Inspired Artificial Intelligence

2h / 10:15–11:45, D–220; Start Thurs. 16.10.2014

Stefan Wermter; Sven Magg

Modul InfM-IR: Intelligente Roboter / Intelligent Robotics

64-424 Lecture Intelligent Robotics

2h / Weekly 2h Mo 14:15–15:45 F–334 Start 13.10.2014

Eugen Richter; Jianwei Zhang

64-425 Integrated Seminar Intelligent Robotics

2h / Weekly 2h Mo 16:15–17:45 F–334 Start 13.10.2014

Benjamin Adler

Modul InfM-RM: Wissenschaftliches Arbeiten / Research Methods

64-750 Lecture Research Methods

2h / Weekly 2h Fr 10:15–11:45 F–235 Start 17.10.2014

Sven Magg; Stefan Wermter

64-751 Practical Course Research Methods

2h / Weekly 2h Fr 12:15–13:45 F–235 Start 17.10.2014

Sven Magg; Stefan Wermter

Modul InfM-Proj: Projekt / Project

(Note: Please consider the duration of the project modules and choose between either 1 project semester or 2 project semesters, respectively.)

64-451 **Master Project Mobile Services Lab**
6h / Weekly 3h Thurs. 14–16 D–125; P3–07 Start 16.10.2014; 3h Thurs. 17:30–20
D–125; P3–07
Start 16.10.2014 *Walid Maalej; Mathias Ellmann*

64-452 **Integrated Seminar Mobile Services Lab**
2h / Weekly 2h Thurs. 16–17:30 D–125 Start 16.10.2014 *Walid Maalej; Mathias
Ellmann*

64-455 **Master Project Energieeffizienzanalysen für Parallelrechner / Energy efficiency
analyses for parallel computers**
6h / Weekly 2h Fr 14–16 DKRZ, 034 Start 17.10.2014
Thomas Ludwig; Nathanael Hübbe; Julian Martin Kunkel

64-455a **Integrated Seminar Energy-Efficient Programming**
2h / Weekly 2h Wedn. 10:15–11:45 DKRZ, 207 Start 15.10.2014
Thomas Ludwig; Nathanael Hübbe; Julian Martin Kunkel

64-468 **Master Project Human-Robot Interaction**
6h / Weekly 2h Thurs. 14:15–15:45 F–235 Start 16.10.2014; 4h Fr 14:15–17:45 F–235
Start 17.10.2014 *Stefan Heinrich; Cornelius Weber; Stefan Wermter*

64-469 **Integrated Seminar Human-Robot Interaction**
2h / Weekly 2h Thurs. 16:15–17:45 F–235 Start 16.10.2014
Stefan Heinrich; Cornelius Weber; Stefan Wermter

64-450 **Master Project Intelligent Robotics (Part 2)**
4h / Weekly 4h Thurs. 14–17:30 F–325 Start 16.10.2014
Benjamin Adler; Eugen Richter

2. Wahlpflichtbereich / Focus Option - Required Elective Area

Modul InfM-WV: Wissensverarbeitung / Knowledge Processing

64-414 **Lecture Knowledge Processing**
3h / Weekly 2h Wedn. 10:15–11:45 D–220 Start 15.10.2014 / every 2 weeks 1h
Wedn. 12:15–13:45 D–220 Start 15.10.2014 *Christopher Habel*

64-415 **Integrated Seminar Knowledge Processing**
1h / every 2 weeks 2h Wedn. 12:15–13:45 D–220 Start 22.10.2014
Christopher Habel

Modul InfM-BV 1: Bildverarbeitung I / Image Processing I

64-420 Lecture Image Processing I

4h / Weekly 2h Mo 10:15–11:45 F–009 Start 13.10.2014; 2h Thurs. 12:15–13:45 F–

009 Start 16.10.2014

Benjamin Seppke

Modul InfM-LTR: Leistungs-/Zuverlässigkeitsbewertung und Traffic-Engineering für Rechnernetze / Evaluation of Computer Networks

64-410 Lecture Evaluation of Computer Networks

2h / Weekly 2h Tue 12:15–13:45 F–635 Start 14.10.2014

Bernd Wolfinger

64-411 Integrated Seminar Evaluation of Computer Networks

2h / Weekly 2h Tue 16:15–17:45 F–635 Start 14.10.2014

Bernd Wolfinger

3. Freier Wahlbereich / Extension Option - Elective Area

Modul InfM-WV: Wissensverarbeitung / Knowledge Processing

64-414 Lecture Knowledge Processing

3h / Weekly 2h Wedn. 10:15–11:45 D–220 ab 15.10.2014 / every 2 weeks 1h Wedn.

12:15–13:45 D–220 Start 15.10.2014

Christopher Habel

64-415 Integrated Seminar Knowledge Processing

1h / every 2 weeks 2h Wedn. 12:15–13:45 D–220 Start 22.10.2014

Christopher Habel

Modul InfM-EAM: Enterprise Architecture Management

This module replaces the module InfM-SWOE "Software and Organisations".

64-428 Lecture Enterprise Architecture Management

2h / Weekly 2h Tue 14:15–15:45 D–125 Start 14.10.2014

Ingrid Schirmer

64-429 Integrated Seminar Enterprise Architecture Management

Gr. 01 (Tue. 16-18 Uhr, D-125)

Weekly 2h Tue 16:15–17:45 D–125 Start 14.10.2014

Paul Drews; Ingrid Schirmer

Gr. 02 (Tue. 16-18 Uhr, D-129)

Weekly 2h Tue 16:15–17:45 D–129 Start 14.10.2014

Paul Drews; Ingrid Schirmer

Modul InfM-SAMW: Systematische Modellierungsmethoden und -werkzeuge / Systemanalytic Modeling

64-432 Lecture Systemanalytic Modeling

3h / Weekly 2h Wedn. 12–13:30 P3–07 Start 15.10.2014; 1h Wedn. 14:30–16 P3–07
Start 15.10.2014 *Bernd Page; Philipp Johannes Göbel*

64-433 Integrated Seminar Systemanalytic Modeling

1h / Weekly 1h Wedn. 14:30–16 P3–07 Start 17.12.2014; 1h Wedn. 12–18 P3–07
Start 21.01.2015 *Andreas Fleischer*

Modul InfM-LTR: Leistungs-/Zuverlässigkeitsbewertung und Traffic-Engineering für Rechnernetze / Evaluation of Computer Networks

64-410 Lecture Leistungs-/ Evaluation of Computer Networks

2h / Weekly 2h Tue 12:15–13:45 F–635 Start 14.10.2014 *Bernd Wolfinger*

64-411 Integrated Seminar Leistungs-/ Evaluation of Computer Networks

2h / Weekly 2h Tue 16:15–17:45 F–635 Start 14.10.2014 *Bernd Wolfinger*

Modul InfM-BV 1: Bildverarbeitung I / Image Processing I

64-420 Lecture Image Processing I

4h / Weekly 2h Mo 10:15–11:45 F–009 Start 13.10.2014;
2h Thurs. 12:15–13:45 F–009 Start 16.10.2014 *Benjamin Seppke*

Modul InfM-IVC: Interaktives Visuelles Computing / Interactive Visual Computing

64-310 Lecture Interactive Visual Computing - German

4h / Weekly 2h Wedn. 10:15–11:45 B–201 Start 15.10.2014;
2h Mo 12:15–13:45 B–201 Start 13.10.2014 *Leonie Dreschler-Fischer*

64-311 Exercises Interactive Visual Computing

IVC- Exercises Gr. 01 (Wedn. 12-14 Uhr) - English

Weekly 2h Wedn. 12:15–13:45 B–201;D–010 Start 15.10.2014 *Susanne Germer*

Modul InfM-UIST: User Interface Software and Technology

64-434 Vorlesung User Interface Software and Technology

2h / Weekly 2h Thursd. 10:15–11:45 D–125 Start 16.10.14
Frank Steinicke; Gerd Bruder; Paul Lubos

64-435 **Exercises User Interface Software and Technology**

Gerd Bruder; Paul Lubos

Exercises Gr. 01 (Di. 10-12, D-220)

Weekly 2h Thursd. 10:15–11:45 D–220 Start 14.10.14

Exercises Gr. 02 (Di. 14-16 Uhr, D-220)

Weekly 2h Thursd. 14:15–15:45 D–220 Start 14.10.14

Exercises Gr. 03 (Di. 16-18 Uhr, F-132)

Weekly 2h Thursd. 16:15–17:45 F–132 Start 14.10.14

InfM-EMSE: Empirical Software Engineering

64-380 **Lecture Software Requirements**

2h / Weekly 2h Mo 10:15–11:45 B–201 Start 13.10.14 *Walid Maalej; Zijad Kurtanovic*

64-381 **Vorlesung Software Patterns**

2 UE / Weekly 1h Tues. 9:15–10 B–201 Start 14.10.14;

1h Thursd. 9:15–10 B–201 Start 16.10.14

Walid Maalej; Zijad Kurtanovic

64-382 **Seminar Empirical Software Engineering**

Kurtanovic

Walid Maalej; Mathias Ellmann; Zijad

Seminar EMSE Gr. 01

Weekly 2h Wedn. 16:15–17:45 C–221 Start 15.10.14

Seminar EMSE Gr. 02

Weekly 2h Thursd. 12:15–13:45 C–221 Start 16.10.14

Seminar EMSE Gr. 03

Weekly 2h Thursd. 12:15–13:45 D–125 Start 16.10.14