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GEFÖRDERT VOM



Bundesministerium  
für Bildung  
und Forschung



# Technische Universität Darmstadt

## Verbundprojekt Open C<sup>3</sup>S Open Competence Center for Cyber Security

### *Studiengang Bachelor Informatik / IT-Sicherheit*

Ergebnisse der Profipotenzialanalyse (PPA) für das

### *Weiterbildungsprofil Certified Information Systems Auditor (CISA)*

## Mapping & Deckungsfaktoren

### Anrechnungsempfehlungen des externen Experten

#### **1. Anrechnungsempfehlungen auf der Grundlage der EQR-Bewertungen der Studiengangmodule durch die Hochschulen**

##### **EQR-Bewertung der beruflichen Prozesse, Mapping & Deckungsfaktoren: externer Experte**

Das Mapping wurde in Bezug auf die für Anrechnung erforderliche Niveauäquivalenz hinsichtlich der EQR-Bewertungen der Studiengangmodule durch die externen Experten (Konsens) durchgeführt, so dass im Kontext der EQR-Bewertungen der Studiengangmodule durch die Hochschulen hinsichtlich des Niveaus Diskrepanzen auftreten. Weitere Information hierzu sind dem Abschlussbericht von Teilprojekt 2 im Projekt Open C<sup>3</sup>S zu entnehmen.

**Anrechnungsempfehlungen (Niveauäquivalenz\* & Deckungsfaktor  $\geq$  70%) sind farblich hervorgehoben.**

#### **2. Anrechnungsempfehlungen auf der Grundlage der EQR-Bewertungen der Studiengangmodule durch die externen Experten (Konsens)**

##### **EQR-Bewertung der beruflichen Prozesse, Mapping & Deckungsfaktoren: externer Experte**

Die EQR-Bewertungen der Studiengangmodule der externen Experten (Konsens) basieren ausschließlich auf den *Angaben und Formulierungen* im Modulhandbuch des entsprechenden Studiengangs, das im Rahmen des Forschungs- und Entwicklungsprojektes Open C<sup>3</sup>S veröffentlicht wurde. Weitere Information hierzu sind dem Abschlussbericht von Teilprojekt 2 im Projekt Open C<sup>3</sup>S zu entnehmen.

**Anrechnungsempfehlungen (Niveauäquivalenz\* & Deckungsfaktor  $\geq$  70%) sind farblich hervorgehoben.**

\* Im Rahmen der Profipotenzialanalysen wurde bei der Zuordnung von beruflichen Prozessen zu einem Studiengangmodul eine negative Abweichung von einer EQR-Niveaustufe als Toleranzbereich für eine noch gegebene Niveauäquivalenz festgelegt. Weitere Information hierzu sind dem Abschlussbericht von Teilprojekt 2 im Projekt Open C<sup>3</sup>S zu entnehmen.



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**Mapping & Deckungsfaktoren**

**1. Anrechnungsempfehlungen auf der Grundlage der  
EQR-Bewertungen der Studiengangmodule durch die Hochschulen**

**EQR-Bewertung der beruflichen Prozesse, Mapping & Deckungsfaktoren: externer Experte**

**Anrechnungsempfehlungen (Niveauäquivalenz & Deckungsfaktor  $\geq 70\%$ ) sind farblich hervorgehoben.**

Modul Studiengang	EQR-Niveau	Deckungs-	Prozess berufliches Bildungsprofil	EQR-Niveau
	Median	faktor %		Median
Mathematik 1	6			
Grundlagen der Programmierung	6			
<b>Einführung in die IT-Sicherheit</b>	<b>6</b>	<b>90</b>	Chapter 2: Governance and Management of IT: 2.12 Business Continuity Planning	<b>6</b>
			Chapter 2: Governance and Management of IT: 2.13 Auditing Business Continuity	<b>7</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.5 IS Network Infrastructure	<b>7</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.6 Auditing Infrastructure and Operations	<b>7</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.7 Disaster Recovery Planning	<b>6</b>
			Chapter 5: Protection of Information Assets: 5.2 Importance of Information Security Management	<b>7</b>
			Chapter 5: Protection of Information Assets: 5.3 Logical Access	<b>7</b>
			Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	<b>7</b>
			Chapter 5: Protection of Information Assets: 5.5 Auditing Information Security Management Framework	<b>7</b>
			Chapter 5: Protection of Information Assets: 5.6 Auditing Network Infrastructure Security	<b>7</b>
Konzeptionelle Modellierung	6	20	Chapter 4: Information Systems Operations, Maintenance and Support: 4.4 IS Architecture and Software	<b>6</b>
Mathematik 2	6			
<b>Rechnerstrukturen</b>	<b>6</b>	<b>30</b>	Chapter 4: Information Systems Operations, Maintenance and Support: 4.3 Information Systems Hardware	<b>6</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.4 IS Architecture and Software	<b>6</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.6 Auditing Infrastructure and Operations	<b>7</b>
Theoretische Informatik	6			
<b>Systemsicherheit 1</b>	<b>6</b>	<b>30</b>	Chapter 4: Information Systems Operations, Maintenance and Support: 4.4 IS Architecture and Software	<b>6</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.6 Auditing Infrastructure and Operations	<b>7</b>
Algorithmen und Datenstrukturen	6			
<b>Kryptographie 1</b>	<b>6</b>	<b>30</b>	Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	<b>7</b>
Systemnahe Programmierung	6			
<b>Systemsicherheit 2</b>	<b>6</b>	<b>50</b>	Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	<b>7</b>
Proseminar	6			
<b>Einführung in die digitale Forensik</b>	<b>6</b>	<b>30</b>	Chapter 1: The Process of Auditing Information Systems: 1.6 Performing an IS Audit	<b>7</b>
Compilerbau	6			
<b>Netzicherheit 1</b>	<b>6</b>	<b>30</b>	Chapter 3: Information Systems Acquisition, Development and Implementation: 3.6 Business Application Systems	<b>7</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.5 IS Network Infrastructure	<b>7</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.6 Auditing Infrastructure and Operations	<b>7</b>
<b>Kryptographie 2</b>	<b>6</b>	<b>30</b>	Chapter 4: Information Systems Operations, Maintenance and Support: 4.5 IS Network Infrastructure	<b>7</b>

Modul Studiengang	EQR-Niveau	Deckungs-faktor %	Prozess berufliches Bildungsprofil	EQR-Niveau
	Median			Median
Realisierung von Softwareprojekten	6	15	Chapter 3: Information Systems Acquisition, Development and Implementation: 3.3 Project Management Structure	7
			Chapter 3: Information Systems Acquisition, Development and Implementation: 3.4 Project Management Practices	7
			Chapter 3: Information Systems Acquisition, Development and Implementation: 3.5 Business Application Development	6
			Chapter 3: Information Systems Acquisition, Development and Implementation: 3.10 System Development Tools and Productivity Aids	5
			Chapter 3: Information Systems Acquisition, Development and Implementation: 3.11 Process Improvement Practices	7
			Chapter 3: Information Systems Acquisition, Development and Implementation: 3.14 Auditing Systems Development, Acquisition And Maintenance	7
Netzsicherheit 2	6	20	Chapter 4: Information Systems Operations, Maintenance and Support: 4.5 IS Network Infrastructure	7
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.6 Auditing Infrastructure and Operations	7
Netzsicherheit 3	6	20	Chapter 3: Information Systems Acquisition, Development and Implementation: 3.6 Business Application Systems	7
			Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	7
			Chapter 5: Protection of Information Assets: 5.6 Auditing Network Infrastructure Security	7
Weiterführende Themen der Computerforensik	6	15	Chapter 1: The Process of Auditing Information Systems: 1.6 Performing an IS Audit	7
			Chapter 5: Protection of Information Assets: 5.2 Importance of Information Security Management	7
			Chapter 5: Protection of Information Assets: 5.5 Auditing Information Security Management Framework	7
Kryptographische Protokolle	6			
Sicherheit mobiler Systeme	6	10	Chapter 5: Protection of Information Assets: 5.9 Mobile Computing	6
Sicherheitsmanagement	6	70	Chapter 1: The Process of Auditing Information Systems: 1.4 Risk Analysis	7
			Chapter 2: Governance and Management of IT: 2.3 IT-Governance	7
			Chapter 2: Governance and Management of IT: 2.8 Risk Management	7
			Chapter 2: Governance and Management of IT: 2.9 Information Systems Management Practices	7
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.2 Information Systems Operations	7
			Chapter 5: Protection of Information Assets: 5.2 Importance of Information Security Management	7
			Chapter 5: Protection of Information Assets: 5.5 Auditing Information Security Management Framework	7
			Chapter 1: The Process of Auditing Information Systems: 1.5. Internal Controls	7
			Chapter 5: Protection of Information Assets: 5.2 Importance of Information Security Management	7
			Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	7
Spam	6	10	Chapter 3: Information Systems Acquisition, Development and Implementation: 3.6 Business Application Systems	7
			Chapter 5: Protection of Information Assets: 5.2 Importance of Information Security Management	7
			Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	7
Netzbasierte Angriffserkennung	6			
User-Centered Security	6	15	Chapter 3: Information Systems Acquisition, Development and Implementation: 3.5 Business Application Development	6
Incident Management	6	90	Chapter 1: The Process of Auditing Information Systems: 1.4 Risk Analysis	7
			Chapter 2: Governance and Management of IT: 2.8 Risk Management	7
			Chapter 2: Governance and Management of IT: 2.9 Information Systems Management Practices	7
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.2 Information Systems Operations	7
			Chapter 5: Protection of Information Assets: 5.2 Importance of Information Security Management	7
			Chapter 5: Protection of Information Assets: 5.5 Auditing Information Security Management Framework	7
Elektronische Identitäten	6	20	Chapter 4: Information Systems Operations, Maintenance and Support: 4.5 IS Network Infrastructure	7
Ethisches Hacking	6	25	Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	7
Anonymität im Netz	6	10	Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	7
Internetforensik	6	40	Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	7
			Chapter 5: Protection of Information Assets: 5.5 Auditing Information Security Management Framework	7
			Chapter 5: Protection of Information Assets: 5.6 Auditing Network Infrastructure Security	7
			Chapter 1: The Process of Auditing Information Systems: 1.6 Performing an IS Audit	7
Seminar	6			
Projekt	6			
Bachelorarbeit	6			



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**Mapping & Deckungsfaktoren**

**2. Anrechnungsempfehlungen auf der Grundlage der  
EQR-Bewertungen der Studiengangmodule durch die externen Experten (Konsens)**

EQR-Bewertung der beruflichen Prozesse, Mapping & Deckungsfaktoren: externer Experte

Anrechnungsempfehlungen (Niveauäquivalenz & Deckungsfaktor  $\geq 70\%$ ) sind farblich hervorgehoben.

Modul Studiengang	EQR-Niveau Median	Deckungs- faktor %	Prozess berufliches Bildungsprofil	EQR-Niveau Median
Mathematik 1	5			
Grundlagen der Programmierung	5			
<b>Einführung in die IT-Sicherheit</b>	<b>3</b>	<b>90</b>	Chapter 2: Governance and Management of IT: 2.12 Business Continuity Planning	<b>6</b>
			Chapter 2: Governance and Management of IT: 2.13 Auditing Business Continuity	<b>7</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.5 IS Network Infrastructure	<b>7</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.6 Auditing Infrastructure and Operations	<b>7</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.7 Disaster Recovery Planning	<b>6</b>
			Chapter 5: Protection of Information Assets: 5.2 Importance of Information Security Management	<b>7</b>
			Chapter 5: Protection of Information Assets: 5.3 Logical Access	<b>7</b>
			Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	<b>7</b>
			Chapter 5: Protection of Information Assets: 5.5 Auditing Information Security Management Framework	<b>7</b>
			Chapter 5: Protection of Information Assets: 5.6 Auditing Network Infrastructure Security	<b>7</b>
Konzeptionelle Modellierung	4	20	Chapter 4: Information Systems Operations, Maintenance and Support: 4.4 IS Architecture and Software	<b>6</b>
Mathematik 2	5			
<b>Rechnerstrukturen</b>	<b>3</b>	<b>30</b>	Chapter 4: Information Systems Operations, Maintenance and Support: 4.3 Information Systems Hardware	<b>6</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.4 IS Architecture and Software	<b>6</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.6 Auditing Infrastructure and Operations	<b>7</b>
Theoretische Informatik	4			
<b>Systemsicherheit 1</b>	<b>3</b>	<b>30</b>	Chapter 4: Information Systems Operations, Maintenance and Support: 4.4 IS Architecture and Software	<b>6</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.6 Auditing Infrastructure and Operations	<b>7</b>
Algorithmen und Datenstrukturen	4			
<b>Kryptographie 1</b>	<b>3</b>	<b>30</b>	Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	<b>7</b>
Systemnahe Programmierung	4			
<b>Systemsicherheit 2</b>	<b>4</b>	<b>50</b>	Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	<b>7</b>
Proseminar	4			
<b>Einführung in die digitale Forensik</b>	<b>4</b>	<b>30</b>	Chapter 1: The Process of Auditing Information Systems: 1.6 Performing an IS Audit	<b>7</b>
Compilerbau	5			
<b>Netzicherheit 1</b>	<b>4</b>	<b>30</b>	Chapter 3: Information Systems Acquisition, Development and Implementation: 3.6 Business Application Systems	<b>7</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.5 IS Network Infrastructure	<b>7</b>
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.6 Auditing Infrastructure and Operations	<b>7</b>
<b>Kryptographie 2</b>	<b>5</b>	<b>30</b>	Chapter 4: Information Systems Operations, Maintenance and Support: 4.5 IS Network Infrastructure	<b>7</b>

Modul Studiengang	EQR-Niveau	Deckungs-faktor %	Prozess berufliches Bildungsprofil	EQR-Niveau
	Median			Median
Realisierung von Softwareprojekten	4	15	Chapter 3: Information Systems Acquisition, Development and Implementation: 3.3 Project Management Structure	7
			Chapter 3: Information Systems Acquisition, Development and Implementation: 3.4 Project Management Practices	7
			Chapter 3: Information Systems Acquisition, Development and Implementation: 3.5 Business Application Development	6
			Chapter 3: Information Systems Acquisition, Development and Implementation: 3.10 System Development Tools and Productivity Aids	5
			Chapter 3: Information Systems Acquisition, Development and Implementation: 3.11 Process Improvement Practices	7
			Chapter 3: Information Systems Acquisition, Development and Implementation: 3.14 Auditing Systems Development, Acquisition And Maintenance	7
Netzsicherheit 2	5	20	Chapter 4: Information Systems Operations, Maintenance and Support: 4.5 IS Network Infrastructure	7
			Chapter 4: Information Systems Operations, Maintenance and Support: 4.6 Auditing Infrastructure and Operations	7
Netzsicherheit 3	5	20	Chapter 3: Information Systems Acquisition, Development and Implementation: 3.6 Business Application Systems	7
			Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	7
			Chapter 5: Protection of Information Assets: 5.6 Auditing Network Infrastructure Security	7
Weiterführende Themen der Computerforensik	5	15	Chapter 1: The Process of Auditing Information Systems: 1.6 Performing an IS Audit	7
			Chapter 5: Protection of Information Assets: 5.2 Importance of Information Security Management	7
			Chapter 5: Protection of Information Assets: 5.5 Auditing Information Security Management Framework	7
Kryptographische Protokolle	5			
Sicherheit mobiler Systeme	4	10	Chapter 5: Protection of Information Assets: 5.9 Mobile Computing	6
Sicherheitsmanagement	4	70	Chapter 1: The Process of Auditing Information Systems: 1.4 Risk Analysis	7
			Chapter 2: Governance and Management of IT: 2.3 IT-Governance	7
			Chapter 2: Governance and Management of IT: 2.8 Risk Management	7
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			Chapter 5: Protection of Information Assets: 5.5 Auditing Information Security Management Framework	7
			Chapter 1: The Process of Auditing Information Systems: 1.5. Internal Controls	7
			Chapter 5: Protection of Information Assets: 5.2 Importance of Information Security Management	7
			Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	7
Spam	4	10	Chapter 5: Protection of Information Assets: 5.2 Importance of Information Security Management	7
			Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	7
			Chapter 3: Information Systems Acquisition, Development and Implementation: 3.6 Business Application Systems	7
Netzbasierte Angriffserkennung	5			
User-Centered Security	4	15	Chapter 3: Information Systems Acquisition, Development and Implementation: 3.5 Business Application Development	6
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			Chapter 4: Information Systems Operations, Maintenance and Support: 4.2 Information Systems Operations	7
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Elektronische Identitäten	4	20	Chapter 4: Information Systems Operations, Maintenance and Support: 4.5 IS Network Infrastructure	7
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Anonymität im Netz	4	10	Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	7
Internetforensik	4	40	Chapter 5: Protection of Information Assets: 5.4 Network Infrastructure Security	7
			Chapter 5: Protection of Information Assets: 5.5 Auditing Information Security Management Framework	7
			Chapter 5: Protection of Information Assets: 5.6 Auditing Network Infrastructure Security	7
			Chapter 1: The Process of Auditing Information Systems: 1.6 Performing an IS Audit	7
Seminar	5			
Projekt	5			
Bachelorarbeit	5			

