

## NARS for MD & PhD

أ - المعرفة والفهم:

المقررات التي تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الدكتوراه في الطب الشرعي والسموم الاكلينيكية)
<ul style="list-style-type: none"> <li>- Genetic and molecular toxicology</li> <li>- Clinical toxicology</li> <li>- Forensic medicine &amp; medicolegal responsibility</li> <li>- Injuries and permanent infirmities.</li> <li>- Forensic Radiology</li> <li>- Forensic odontology</li> <li>- Addiction Medicine</li> </ul>	A1-A8	<p>A1: Identify the various legal and medico-legal problems in civil and criminal cases and define the principles and concepts of medical malpractice in different branches of medicine.</p> <p>A2: Describe advanced methods for medico-legal autopsy and updates in methods of identification.</p> <p>A3: Identify principles and applications of forensic psychiatry, radiology and odontology.</p> <p>A4: Discuss the clinical forensic applications of different injuries and permanent infirmities.</p> <p>A5: Define basics and principles of genetics and its application in toxicology .</p> <p>A6: Recognize standard guidelines in management of different poisoning cases.</p> <p>A7: Discuss the application of nanotoxicology, protocols for dealing with radiation and toxic hazardous incidents.</p> <p>A8: Recognize &amp; define thoroughly the principles of research, medical statistics and teaching skills.</p>	1. The theories, concepts and modern knowledge in the field of specialization and other related field
<ul style="list-style-type: none"> <li>- Clinical toxicology</li> <li>- Forensic medicine &amp; medicolegal responsibility</li> <li>- Injuries and permanent infirmities.</li> <li>- Thesis</li> </ul>	A1-A8	<p>A1: Identify the various legal and medico-legal problems in civil and criminal cases and define the principles and concepts of medical malpractice in different branches of medicine.</p> <p>A2: Describe advanced methods for medico-legal autopsy and updates in methods of identification.</p> <p>A3: Identify principles and applications of forensic psychiatry, radiology and odontology.</p> <p>A4: Discuss the clinical forensic applications of different injuries and permanent infirmities.</p> <p>A5: Define basics and principles of genetics and its application in toxicology .</p> <p>A6: Recognize standard guidelines in management of different poisoning cases.</p> <p>A7: Discuss the application of nanotoxicology, protocols for dealing with radiation and toxic hazardous</p>	2. The basics, methodologies, ethics of scientific research and its versatile tools

		incidents. A8: Recognize & define thoroughly the principles of research, medical statistics and teaching skills.	
- Forensic medicine & medicolegal responsibility	A1	A1: Identify the various legal and medico-legal problems in civil and criminal cases and define the principles and concepts of medical malpractice in different branches of medicine.	3. The moral and legal ethics of the professional practice in the area of specialization
- Clinical toxicology - Forensic medicine & medicolegal responsibility - Injuries and permanent infirmities. - Forensic Radiology - Forensic odontology - Addiction Medicine	A1-A8	A1: Identify the various legal and medico-legal problems in civil and criminal cases and define the principles and concepts of medical malpractice in different branches of medicine. A2: Describe advanced methods for medico-legal autopsy and updates in methods of identification. A3: Identify principles and applications of forensic psychiatry, radiology and odontology. A4: Discuss the clinical forensic applications of different injuries and permanent infirmities. A5: Define basics and principles of genetics and its application in toxicology . A6: Recognize standard guidelines in management of different poisoning cases. A7: Discuss the application of nanotoxicology, protocols for dealing with radiation and toxic hazardous incidents. A8: Recognize & define thoroughly the principles of research, medical statistics and teaching skills.	4. The concepts and principles of quality of the professional practice in the area of specialization
- Clinical toxicology - Addiction Medicine	A5-A7	A5: Define basics and principles of genetics and its application in toxicology . A6: Recognize standard guidelines in management of different poisoning cases. A7: Discuss the application of nanotoxicology, protocols for dealing with radiation and toxic hazardous incidents.  A8: Recognize & define thoroughly the principles of research, medical statistics and teaching skills.	5. The knowledge on the effects of professional practice on the environment and ways of development and maintenance of the environment

## ب - القدرات الذهنية :

المقررات التي تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الدكتوراه في الطب الشرعي والسموم الأكلينيكية)
<ul style="list-style-type: none"> <li>- Clinical toxicology</li> <li>- Forensic medicine &amp; medicolegal responsibility,</li> <li>- Injuries and permanent infirmities.</li> <li>- Forensic Radiology</li> <li>- Forensic odontology</li> <li>- Addiction Medicine</li> </ul>	B1-8	<p><b>B1:</b> Interpret and analyze different problems of malpractice.</p> <p><b>B2:</b> Interpret forensic &amp; medical evidences with objectivity and balance and criticize a medicolegal report based on evidences, criminalistic basics and crime scene investigation and be able to rewrite the report.</p> <p><b>B3:</b> Analyze and evaluate of information related to different types of injuries and infirmities.</p> <p><b>B4:</b> Analyze toxicological case scenarios and solve specific problems on the basis of limited and contradictory information to reach proper diagnosis.</p> <p><b>B5:</b> Select appropriate medical investigative tools in a cost-effective, ethical and useful manner.</p> <p><b>B6:</b> Assess the risks in dealing with cases of occupational exposure &amp; addiction and plan to improve performance.</p> <p><b>B7:</b> Implement emergency or disaster plans for the workplace and/or the community.</p> <p><b>B8:</b> Construct experimental design and statistical analysis of data as related to laboratory, clinical, and epidemiologic research.</p>	1) Analyze and evaluate of information in the field of specialization and make full use of such information to solve problems
<ul style="list-style-type: none"> <li>- Clinical toxicology</li> <li>- Addiction Medicine</li> <li>-</li> </ul>	B4	<p><b>B4:</b> Analyze toxicological case scenarios and solve specific problems on the basis of limited and contradictory information to reach proper diagnosis.</p>	2) Solve specific problems on the basis of limited and contradictory information

- Thesis	B8	<b>B8:</b> Construct experimental design and statistical analysis of data as related to laboratory, clinical, and epidemiologic research.	3) Carry out a research studies to add new information to the knowledge
- Thesis	B8	<b>B8:</b> Construct experimental design and statistical analysis of data as related to laboratory, clinical, and epidemiologic research.	4) Write scientific papers
- Clinical toxicology - Forensic medicine & medicolegal responsibility, - Injuries and permanent infirmities. - Addiction Medicine	B6	<b>B6:</b> Assess the risks in dealing with cases of occupational exposure & addiction and plan to improve performance.	5) Assess and analyze risks in the field of specialization
- Clinical toxicology - Forensic medicine & medicolegal responsibility, - Injuries and permanent infirmities.	B6	<b>B6:</b> Assess the risks in dealing with cases of occupational exposure & addiction and plan to improve performance.	6) Plan to improve performance in the field of specialization
- Clinical toxicology - Forensic medicine & medicolegal responsibility, - Injuries and permanent infirmities. - Addiction Medicine	B2,4,5	<b>B2:</b> Interpret forensic & medical evidences with objectivity and balance and criticize a medicolegal report based on evidences, criminalistic basics and crime scene investigation and be able to rewrite the report. <b>B4:</b> Analyze toxicological case scenarios and solve specific problems on the basis of limited and contradictory information to reach proper diagnosis. <b>B5:</b> Select appropriate medical investigative tools in a cost-effective, ethical and useful manner.	7) Make good decisions in different professional aspects
- Clinical toxicology - Forensic medicine & medicolegal responsibility, - Injuries and permanent infirmities.	B7	<b>B7:</b> Implement emergency or disaster plans for the workplace and/or the community.	8) Have innovation/creativity
- Clinical toxicology - Forensic medicine & medicolegal responsibility, - Injuries and permanent infirmities. - Addiction Medicine	B1-4, B 8	<b>B1:</b> Interpret and analyze different problems of malpractice. <b>B2:</b> Interpret forensic & medical evidences with objectivity and balance and criticize a medicolegal report based on evidences, criminalistic basics and	9) Discuss and negotiate in high level of confidence based upon proofs and evidences

		<p>crime scene investigation and be able to rewrite the report.</p> <p><b>B3:</b> Analyze and evaluate of information related to different types of injuries and infirmities.</p> <p><b>B4:</b> Analyze toxicological case scenarios and solve specific problems on the basis of limited and contradictory information to reach proper diagnosis.</p> <p><b>B8:</b> Construct experimental design and statistical analysis of data as related to laboratory, clinical, and epidemiologic research.</p>	
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### ج - المهارات العملية:

المقررات التي تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الدكتوراه في الطب الشرعي والسموم الاكلينيكية)
<ul style="list-style-type: none"> <li>- Clinical toxicology</li> <li>- Forensic medicine &amp; medicolegal responsibility,</li> <li>- Injuries and permanent infirmities.</li> <li>- Addiction Medicine</li> </ul>	C1-C6	<p><b>C1:</b> Perform detailed medico-legal autopsies to discover artifacts in autopsy and reconstruct proper medicolegal reports.</p> <p><b>C2:</b> Demonstrate the different medico-legal specimens and comment properly on them.</p> <p><b>C3:</b> Perform clinical examination for cases after proper history taking.</p> <p><b>C4:</b> Apply the international guidelines in management of different toxicological cases attending the unit in emergency hospital.</p> <p><b>C5:</b> Demonstrate emergent versus non-emergent toxic conditions and implement an appropriate plan of care.</p> <p><b>C6:</b> Construct proper clinical toxicology reports.</p>	1) Apply modern and principle professional skills in the area of specialization

<ul style="list-style-type: none"> <li>- Clinical toxicology course</li> <li>- Forensic medicine &amp; medicolegal responsibility,</li> <li>- Injuries and permanent infirmities.</li> </ul>	C1 , C6	<p><b>C1:</b> Perform detailed medico-legal autopsies to discover artifacts in autopsy and reconstruct proper medicolegal reports.</p> <p><b>C6:</b> Construct proper clinical toxicology reports.</p>	2) Write and evaluate technical reports
<ul style="list-style-type: none"> <li>- Clinical toxicology course</li> <li>- Forensic medicine &amp; medicolegal responsibility,</li> <li>- Injuries and permanent infirmities.</li> </ul>	C3 – C5	<p><b>C3:</b> Perform clinical examination for cases after proper history taking.</p> <p><b>C4:</b> Apply the international guidelines in management of different toxicological cases attending the unit in emergency hospital.</p> <p><b>C5:</b> Demonstrate emergent versus non-emergent toxic conditions and implement an appropriate plan of care.</p>	3) Adopt assessment methods and tools existing in the area of specialization.
<ul style="list-style-type: none"> <li>- Clinical toxicology</li> <li>- Addiction Medicine</li> </ul>	C4-C5	<p><b>C4:</b> Apply the international guidelines in management of different toxicological cases attending the unit in emergency hospital.</p> <p><b>C5:</b> Demonstrate emergent versus non-emergent toxic conditions and implement an appropriate plan of care.</p>	4) Use of the appropriate technological means to serve the professional practice.
<ul style="list-style-type: none"> <li>- Clinical toxicology course</li> <li>- Forensic medicine &amp; medicolegal responsibility</li> <li>- Addiction Medicine</li> </ul>	C1 C3-C4	<p><b>C1:</b> Perform detailed medico-legal autopsies to discover artifacts in autopsy and reconstruct proper medicolegal reports.</p> <p><b>C3:</b> Perform clinical examination for cases after proper history taking.</p> <p><b>C4:</b> Apply the international guidelines in management of different toxicological cases attending the unit in emergency hospital.</p>	5) Plan to improve the performance of the professional practice and development of the performance of others

د- مهارات الاتصال:

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<ul style="list-style-type: none"> <li>- Clinical toxicology course</li> <li>- Forensic medicine &amp; medicolegal responsibility</li> <li>- Injuries and permanent infirmities.</li> <li>- Addiction Medicine</li> </ul>	D1-2	<p><b>D1:</b> Communicate effectively with patients, families, and the public, as appropriate and describe and practice delivering bad news to the patient.</p> <p><b>D2:</b> Communicate effectively with physicians, other health professionals, and health related agencies.</p>	1) Communicate effectively in different aspects
<ul style="list-style-type: none"> <li>- Clinical toxicology course</li> <li>- Forensic medicine &amp; medicolegal responsibility</li> <li>- Injuries and permanent infirmities.</li> <li>- Addiction Medicine</li> <li>- Thesis</li> </ul>	D4	<p><b>D4:</b> Use health care information system in improving patient care and keep patient medical records.</p> <p><b>D5:</b> Apply principles of medical ethics in dealing with cases' information.</p>	2) Demonstrate efficient IT capabilities in such a way that serves in the development of the professional practice
<ul style="list-style-type: none"> <li>- Clinical toxicology course</li> <li>- Forensic medicine &amp; medicolegal responsibility</li> <li>- Injuries and permanent infirmities.</li> <li>- Addiction Medicine</li> </ul>	D6	<p><b>D6:</b> Conduct an effective lecture, presentation, case management according to the known standards and time schedule and participate in CME program and perform self-appraisal.</p>	3) Manage the scientific meetings and manage time
<ul style="list-style-type: none"> <li>- Clinical toxicology course</li> <li>- Forensic medicine &amp; medicolegal responsibility</li> <li>- Injuries and permanent infirmities.</li> <li>- Thesis</li> </ul>	D7	<p><b>D7:</b> Conduct a research project, select an appropriate research methodology, and choose the proper research statistics to analyze data.</p>	4) Adopt self-assessment and Adopt life-long learning
<ul style="list-style-type: none"> <li>- Clinical toxicology course</li> <li>- Forensic medicine &amp; medicolegal responsibility</li> <li>- Injuries and permanent infirmities.</li> <li>- Addiction Medicine</li> <li>- Thesis</li> </ul>	D4-5, D7	<p><b>D4:</b> Use health care information system in improving patient care and keep patient medical records.</p> <p><b>D5:</b> Apply principles of medical ethics in dealing with cases' information.</p> <p><b>D7:</b> Conduct a research project, select an appropriate research methodology, and choose the proper research statistics to analyze data.</p>	5) Use different resources for information and knowledge
<ul style="list-style-type: none"> <li>- Clinical toxicology course</li> <li>- Forensic medicine &amp; medicolegal responsibility</li> <li>- Injuries and permanent</li> </ul>	D1-D3	<p><b>D1:</b> Communicate effectively with patients, families, and the public, as appropriate and describe and practice</p>	6) Collaborate effectively within multidisciplinary team and lead team works

<p>infirmities.</p> <ul style="list-style-type: none"> <li>- Addiction Medicine</li> </ul>		<p>delivering bad news to the patient.</p> <p><b>D2:</b> Communicate effectively with physicians, other health professionals, and health related agencies.</p> <p><b>D3:</b> Direct and lead a group of junior staff and be a model for applying professional and research ethics.</p>	
<ul style="list-style-type: none"> <li>- Clinical toxicology course</li> <li>- Forensic medicine &amp; medicolegal responsibility</li> <li>- Injuries and permanent infirmities.</li> <li>- Addiction Medicine</li> </ul>	D7	<p><b>D7:</b> Conduct a research project, select an appropriate research methodology, and choose the proper research statistics to analyze data.</p>	7) Demonstrate a high level of competence in the management of time and scientific meetings