

# Forensic DNA Exam Blueprint

Knowledge/Skill Domains	Tasks using domain knowledge & skills	F&I Quartiles (Top to bottom, 1-4)	Test %
<b>1 Science &amp; Math</b>			<b>41%</b>
<b>1.1 Biology (e.g. molecular, cellular)</b>	B10: Prepare samples for DNA processing	1	7.3%
	F4: Provide testimony (e.g. depositions, court) D2: Assess quality of DNA typing samples D1: Assess quality of DNA typing controls D4: Eliminate DNA process artifacts D3: Troubleshoot DNA typing data (e.g. re-amplifications, re-injectio A1: Review case information E5: Communicate technically reviewed results (e.g. written, verbal) E2: Conduct technical review A2: Develop testing plan G5: Participate in proficiency testing D12: Address additional evidence testing H1: Review current literature	2	
	F3: Participate in pre-trial conferences E1: Write draft report (e.g. serology and/or DNA) K2: Participate in laboratory meetings (e.g. staff, QA, unit) G12: Perform contamination prevention procedures E4: Address review issues (e.g. technical, administrative) H2: Complete continuing education activities B9: Collect samples from evidence	3	
	D5: Determine number of DNA contributors C4: Interpret quantitation results G1: Prepare work area C3: Quantify DNA extracts C6: Perform DNA amplifications (e.g. autosomal/Y-STR, mito) C7: Perform DNA typing (e.g. CE run, data collection) C1: Perform non-differential extractions C2: Perform differential extractions D6: Deduce DNA contributors K4: Respond to daily inquiries (e.g. email, phone calls) G4: Verify reagent quality	4	
<b>1.2 Chemistry</b>	C3: Quantify DNA extracts C6: Perform DNA amplifications (e.g. autosomal/Y-STR, mito) C7: Perform DNA typing (e.g. CE run, data collection) C1: Perform non-differential extractions C2: Perform differential extractions	1	8.4%
	F4: Provide testimony (e.g. depositions, court) D2: Assess quality of DNA typing samples D1: Assess quality of DNA typing controls D4: Eliminate DNA process artifacts D3: Troubleshoot DNA typing data (e.g. re-amplifications, re-injectio E5: Communicate technically reviewed results (e.g. written, verbal) E2: Conduct technical review G3: Prepare laboratory reagents B10: Prepare samples for DNA processing G5: Participate in proficiency testing H1: Review current literature	2	
	F3: Participate in pre-trial conferences E1: Write draft report (e.g. serology and/or DNA) K2: Participate in laboratory meetings (e.g. staff, QA, unit) C4: Interpret quantitation results E4: Address review issues (e.g. technical, administrative) H2: Complete continuing education activities	3	
	G1: Prepare work area G12: Perform contamination prevention procedures A1: Review case information A2: Develop testing plan D12: Address additional evidence testing K4: Respond to daily inquiries (e.g. email, phone calls) G4: Verify reagent quality G2: Perform instrument maintenance	4	

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<b>1.3 Genetics</b>	D5: Determine number of DNA contributors D7: Compare DNA contributors (e.g. knowns, evidentiary samples) D8: Calculate sample statistics (e.g. RMP, LR, counting method) D6: Deduce DNA contributors	1	6.7%
	E5: Communicate technically reviewed results (e.g. written, verbal) E2: Conduct technical review G5: Participate in proficiency testing		
	F4: Provide testimony (e.g. depositions, court) D2: Assess quality of DNA typing samples D11: Evaluate CODIS matches F3: Participate in pre-trial conferences H1: Review current literature	2	
	D1: Assess quality of DNA typing controls D4: Eliminate DNA process artifacts E1: Write draft report (e.g. serology and/or DNA) K2: Participate in laboratory meetings (e.g. staff, QA, unit) D3: Troubleshoot DNA typing data (e.g. re-amplifications, re-injectio E4: Address review issues (e.g. technical, administrative) H2: Complete continuing education activities K4: Respond to daily inquiries (e.g. email, phone calls)	3 4	
<b>1.4 Population Genetics</b>	D8: Calculate sample statistics (e.g. RMP, LR, counting method) E5: Communicate technically reviewed results (e.g. written, verbal)	1	4.5%
	E2: Conduct technical review G5: Participate in proficiency testing		
	F4: Provide testimony (e.g. depositions, court) D11: Evaluate CODIS matches D6: Deduce DNA contributors F3: Participate in pre-trial conferences H1: Review current literature	2	
	E1: Write draft report (e.g. serology and/or DNA) K2: Participate in laboratory meetings (e.g. staff, QA, unit) E4: Address review issues (e.g. technical, administrative) H2: Complete continuing education activities K4: Respond to daily inquiries (e.g. email, phone calls)	3 4	
<b>1.5 Statistics</b>	C4: Interpret quantitation results D8: Calculate sample statistics (e.g. RMP, LR, counting method) D6: Deduce DNA contributors E5: Communicate technically reviewed results (e.g. written, verbal)	1	5.3%
	E2: Conduct technical review G5: Participate in proficiency testing		
	F4: Provide testimony (e.g. depositions, court) D11: Evaluate CODIS matches F3: Participate in pre-trial conferences H1: Review current literature	2	
	E1: Write draft report (e.g. serology and/or DNA) D5: Determine number of DNA contributors K2: Participate in laboratory meetings (e.g. staff, QA, unit) E4: Address review issues (e.g. technical, administrative) H2: Complete continuing education activities K4: Respond to daily inquiries (e.g. email, phone calls)	3 4	

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Knowledge/Skill Domains	Tasks using domain knowledge & skills	F&I Quartiles (Top to bottom, 1-4)	Test %
<b>1.6 Math</b>	C4: Interpret quantitation results D8: Calculate sample statistics (e.g. RMP, LR, counting method) C5: Normalize DNA samples (e.g. concentration, dilution) D6: Deduce DNA contributors E2: Conduct technical review G5: Participate in proficiency testing	1	9.2%
	D4: Eliminate DNA process artifacts D5: Determine number of DNA contributors D11: Evaluate CODIS matches E5: Communicate technically reviewed results (e.g. written, verbal) G3: Prepare laboratory reagents F4: Provide testimony (e.g. depositions, court) H1: Review current literature	2	
	D2: Assess quality of DNA typing samples D1: Assess quality of DNA typing controls F3: Participate in pre-trial conferences G2: Perform instrument maintenance K2: Participate in laboratory meetings (e.g. staff, QA, unit) C3: Quantify DNA extracts C6: Perform DNA amplifications (e.g. autosomal/Y-STR, mito) C7: Perform DNA typing (e.g. CE run, data collection) D9: Determine CODIS eligibility of profiles C1: Perform non-differential extractions D3: Troubleshoot DNA typing data (e.g. re-amplifications, re-injectio C2: Perform differential extractions H2: Complete continuing education activities	3	
	E1: Write draft report (e.g. serology and/or DNA) E4: Address review issues (e.g. technical, administrative) B2: Inventory evidence items B10: Prepare samples for DNA processing A2: Develop testing plan K4: Respond to daily inquiries (e.g. email, phone calls) G4: Verify reagent quality B3: Address case discrepancies E3: Conduct administrative review B9: Collect samples from evidence	4	

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Knowledge/Skill Domains	Tasks using domain knowledge & skills	F&I Quartiles (Top to bottom, 1-4)	Test %
<b>2 Quality Assurance/Quality Control</b>			<b>9%</b>
<b>2.1 ISO 17025 / ANAB</b>	F4: Provide testimony (e.g. depositions, court) E6: Issue final report E2: Conduct technical review A2: Develop testing plan G5: Participate in proficiency testing G4: Verify reagent quality	2	2.2%
	G2: Perform instrument maintenance	3	
<b>2.2 QAS</b>	F4: Provide testimony (e.g. depositions, court) E6: Issue final report E2: Conduct technical review G5: Participate in proficiency testing G4: Verify reagent quality	2	4.0%
	G2: Perform instrument maintenance	3	
	D2: Assess quality of DNA typing samples D1: Assess quality of DNA typing controls D4: Eliminate DNA process artifacts D5: Determine number of DNA contributors C4: Interpret quantitation results C3: Quantify DNA extracts C6: Perform DNA amplifications (e.g. autosomal/Y-STR, mito) C7: Perform DNA typing (e.g. CE run, data collection) D7: Compare DNA contributors (e.g. knowns, evidentiary samples) D9: Determine CODIS eligibility of profiles D8: Calculate sample statistics (e.g. RMP, LR, counting method)	4	
	C1: Perform non-differential extractions C5: Normalize DNA samples (e.g. concentration, dilution) D3: Troubleshoot DNA typing data (e.g. re-amplifications, re-injectio) C2: Perform differential extractions D6: Deduce DNA contributors D10: Enter profiles into CODIS		
<b>2.3 SWGDAM</b>	D5: Determine number of DNA contributors D7: Compare DNA contributors (e.g. knowns, evidentiary samples) D8: Calculate sample statistics (e.g. RMP, LR, counting method) D6: Deduce DNA contributors	1	3.1%
	G12: Perform contamination prevention procedures	2	
	A2: Develop testing plan	3	
	D2: Assess quality of DNA typing samples D1: Assess quality of DNA typing controls D4: Eliminate DNA process artifacts D3: Troubleshoot DNA typing data (e.g. re-amplifications, re-injectio) F4: Provide testimony (e.g. depositions, court)	4	

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Knowledge/Skill Domains	Tasks using domain knowledge & skills	F&I Quartiles (Top to bottom, 1-4)	Test %
<b>3 Computer</b>			<b>12%</b>
<b>3.1 Computer</b>	B4: Document evidence	1	4.4%
	D4: Eliminate DNA process artifacts		
	C4: Interpret quantitation results	2	
	D8: Calculate sample statistics (e.g. RMP, LR, counting method)		
<b>3.2 LIMS</b>	B1: Maintain chain of custody		4.1%
	C3: Quantify DNA extracts		
	C7: Perform DNA typing (e.g. CE run, data collection)		
	D6: Deduce DNA contributors	3	
	D10: Enter profiles into CODIS		
	G5: Participate in proficiency testing		
	D2: Assess quality of DNA typing samples		
	D1: Assess quality of DNA typing controls		
	E6: Issue final report		
	E1: Write draft report (e.g. serology and/or DNA)		
	D5: Determine number of DNA contributors		
	C6: Perform DNA amplifications (e.g. autosomal/Y-STR, mito)	4	
C1: Perform non-differential extractions			
C5: Normalize DNA samples (e.g. concentration, dilution)			
C2: Perform differential extractions			
K4: Respond to daily inquiries (e.g. email, phone calls)			
H1: Review current literature			
D11: Evaluate CODIS matches			
H2: Complete continuing education activities			
<b>3.3 CODIS</b>	B4: Document evidence	1	3.2%
	B1: Maintain chain of custody		
	B2: Inventory evidence items	2	
	E6: Issue final report		
	E1: Write draft report (e.g. serology and/or DNA)		
	E2: Conduct technical review		
	G5: Participate in proficiency testing		
	G4: Verify reagent quality	3	
	E3: Conduct administrative review		
	G2: Perform instrument maintenance		
	G3: Prepare laboratory reagents		
	C4: Interpret quantitation results		
C3: Quantify DNA extracts			
C7: Perform DNA typing (e.g. CE run, data collection)			
C6: Perform DNA amplifications (e.g. autosomal/Y-STR, mito)			
C1: Perform non-differential extractions			
C5: Normalize DNA samples (e.g. concentration, dilution)			
C2: Perform differential extractions	4		
A1: Review case information			
B10: Prepare samples for DNA processing			
H1: Review current literature			
H2: Complete continuing education activities			
F2: Address subpoenas			
D9: Determine CODIS eligibility of profiles	1	3.2%	
D11: Evaluate CODIS matches			
E2: Conduct technical review	2		
D10: Enter profiles into CODIS			
D2: Assess quality of DNA typing samples			
D1: Assess quality of DNA typing controls	3		
A1: Review case information			
E1: Write draft report (e.g. serology and/or DNA)			
D7: Compare DNA contributors (e.g. knowns, evidentiary samples)			
D8: Calculate sample statistics (e.g. RMP, LR, counting method)			
D6: Deduce DNA contributors			
E5: Communicate technically reviewed results (e.g. written, verbal)	4		
E4: Address review issues (e.g. technical, administrative)			
F4: Provide testimony (e.g. depositions, court)			
H2: Complete continuing education activities			
F3: Participate in pre-trial conferences			

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<b>4 Communication</b>			<b>5%</b>
<b>4.1 Communication (e.g. oral, written, presentation, listening, interpersonal)</b>	E5: Communicate technically reviewed results (e.g. written, verbal)	1	5.3%
	E4: Address review issues (e.g. technical, administrative)		
	F4: Provide testimony (e.g. depositions, court)		
	K4: Respond to daily inquiries (e.g. email, phone calls)		
	E1: Write draft report (e.g. serology and/or DNA)	2	
	B4: Document evidence		
	F3: Participate in pre-trial conferences		
	K2: Participate in laboratory meetings (e.g. staff, QA, unit)		
	H2: Complete continuing education activities		
	D3: Troubleshoot DNA typing data (e.g. re-amplifications, re-injectio		
	A1: Review case information		
	E2: Conduct technical review	3	
	G5: Participate in proficiency testing		
	D12: Address additional evidence testing		
	B3: Address case discrepancies		
	E3: Conduct administrative review		
B1: Maintain chain of custody			
E6: Issue final report			
D9: Determine CODIS eligibility of profiles	4		
H1: Review current literature			
F2: Address subpoenas			

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<b>5 Process (DNA)</b>			<b>18%</b>
<b>5.1 Organizational (e.g. Time Management, Multi-Tasking)</b>	A2: Develop testing plan G5: Participate in proficiency testing	1	2.3%
	E4: Address review issues (e.g. technical, administrative) E2: Conduct technical review E3: Conduct administrative review D6: Deduce DNA contributors	2	
<b>5.2 Critical Thinking (e.g. Analytical, Decision Making, Problem-solving)</b>	K4: Respond to daily inquiries (e.g. email, phone calls) K2: Participate in laboratory meetings (e.g. staff, QA, unit)	3	7.5%
	D3: Troubleshoot DNA typing data (e.g. re-amplifications, re-injectio) D6: Deduce DNA contributors E2: Conduct technical review	1	
	D2: Assess quality of DNA typing samples C4: Interpret quantitation results D8: Calculate sample statistics (e.g. RMP, LR, counting method) E4: Address review issues (e.g. technical, administrative) A2: Develop testing plan G5: Participate in proficiency testing F4: Provide testimony (e.g. depositions, court) D12: Address additional evidence testing H1: Review current literature	2	
	D1: Assess quality of DNA typing controls D4: Eliminate DNA process artifacts E1: Write draft report (e.g. serology and/or DNA) D5: Determine number of DNA contributors B9: Collect samples from evidence K2: Participate in laboratory meetings (e.g. staff, QA, unit) D9: Determine CODIS eligibility of profiles K4: Respond to daily inquiries (e.g. email, phone calls) B3: Address case discrepancies H2: Complete continuing education activities	3	
<b>5.3 Scientific method</b>	D7: Compare DNA contributors (e.g. knowns, evidentiary samples) B4: Document evidence A1: Review case information E5: Communicate technically reviewed results (e.g. written, verbal) G4: Verify reagent quality D11: Evaluate CODIS matches E3: Conduct administrative review F3: Participate in pre-trial conferences G2: Perform instrument maintenance	4	8.7%
	C4: Interpret quantitation results D7: Compare DNA contributors (e.g. knowns, evidentiary samples) D6: Deduce DNA contributors A1: Review case information E5: Communicate technically reviewed results (e.g. written, verbal) E2: Conduct technical review A2: Develop testing plan G5: Participate in proficiency testing	1	
	F4: Provide testimony (e.g. depositions, court) D12: Address additional evidence testing H1: Review current literature D5: Determine number of DNA contributors D8: Calculate sample statistics (e.g. RMP, LR, counting method) F3: Participate in pre-trial conferences K2: Participate in laboratory meetings (e.g. staff, QA, unit)	2	
	H2: Complete continuing education activities D4: Eliminate DNA process artifacts E1: Write draft report (e.g. serology and/or DNA) D9: Determine CODIS eligibility of profiles B4: Document evidence E4: Address review issues (e.g. technical, administrative) B3: Address case discrepancies B9: Collect samples from evidence	3	
<b>5.3 Scientific method</b>	D2: Assess quality of DNA typing samples D1: Assess quality of DNA typing controls D3: Troubleshoot DNA typing data (e.g. re-amplifications, re-injectio) K4: Respond to daily inquiries (e.g. email, phone calls) G4: Verify reagent quality D11: Evaluate CODIS matches G2: Perform instrument maintenance	4	8.7%

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<b>6 Laboratory</b>			<b>8%</b>
<b>6.1 Good laboratory practice (e.g. safety, PPE)</b>	G12: Perform contamination prevention procedures B9: Collect samples from evidence G5: Participate in proficiency testing	2	3.5%
	G1: Prepare work area C3: Quantify DNA extracts C7: Perform DNA typing (e.g. CE run, data collection) C1: Perform non-differential extractions B4: Document evidence C5: Normalize DNA samples (e.g. concentration, dilution) G3: Prepare laboratory reagents C2: Perform differential extractions B2: Inventory evidence items B10: Prepare samples for DNA processing	3	
<b>6.2 Laboratory Skills (e.g. pipetting, robotics)</b>	C6: Perform DNA amplifications (e.g. autosomal/Y-STR, mito) G2: Perform instrument maintenance	4	
	C3: Quantify DNA extracts C7: Perform DNA typing (e.g. CE run, data collection) C6: Perform DNA amplifications (e.g. autosomal/Y-STR, mito) C1: Perform non-differential extractions C5: Normalize DNA samples (e.g. concentration, dilution) C2: Perform differential extractions G5: Participate in proficiency testing G12: Perform contamination prevention procedures G3: Prepare laboratory reagents B10: Prepare samples for DNA processing B9: Collect samples from evidence G2: Perform instrument maintenance	1 2 3	4.7%
<b>7 Forensic Disciplines</b>			<b>2%</b>
<b>7.1 Other forensic disciplines</b>	A2: Develop testing plan B4: Document evidence	1 2	2.4%
	B9: Collect samples from evidence A1: Review case information K4: Respond to daily inquiries (e.g. email, phone calls) H1: Review current literature B3: Address case discrepancies H2: Complete continuing education activities F3: Participate in pre-trial conferences K2: Participate in laboratory meetings (e.g. staff, QA, unit) B1: Maintain chain of custody	3 4	
<b>8 Legal</b>			<b>3%</b>
<b>8.1 Legal system</b>	B1: Maintain chain of custody E6: Issue final report B4: Document evidence	1	3.1%
	F4: Provide testimony (e.g. depositions, court) D9: Determine CODIS eligibility of profiles A1: Review case information K4: Respond to daily inquiries (e.g. email, phone calls) F2: Address subpoenas F3: Participate in pre-trial conferences H1: Review current literature K2: Participate in laboratory meetings (e.g. staff, QA, unit)	2 3 4	
			<b>100%</b>