



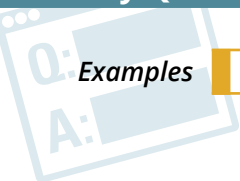
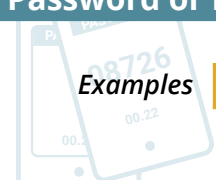




Authentication Methods from Highest Level of Assurance

	FACTOR	ASSURANCE	USER GROUP
WebAuthn/			
	II or III	HIGHEST	Faculty, Staff
<i>Examples</i>	FIDO 2.0, Windows Hello, Face ID, etc.		
	PRO: Most Secure	CON: Requires devices/hardware	
Push Authentication			
	II	HIGH	Faculty, Staff, HS
<i>Examples</i>	RapidIdentity Mobile		
	PRO: User convenience, Low cost, Easy Administration	CON: Requires smartphone, devices can be lost/stolen	
DUO Authentication			
	II	MEDIUM	Faculty, Staff
<i>Examples</i>	DUO Provided Methods (U2F/SMS/Voice)		
	PRO: Leverages existing DUO investments	CON: Requires DUO licensing	
TOTP via Mobile App			
	II	MEDIUM	Faculty, Staff, HS
<i>Examples</i>	Google Authenticator, Windows, etc.		
	PRO: Common for remote access, leverages existing device, time-based expiration	CON: Requires smartphone or personal device	
Kerberos			
	I	MEDIUM	Domain Joined Windows Users
<i>Examples</i>	Windows Machine on Local Networks		
	PRO: No additional action to authenticate, Uses Kerberos browser ticket with user's domain credential	CON: Requires domain connection	
Email			
	II	MEDIUM	Faculty, Staff, HS
<i>Examples</i>	OTP Sent to Alternate/Personal Email		
	PRO: No hardware/enrollment needed	CON: Can be intercepted/spoofed, Requires alternate email	

	FACTOR	ASSURANCE	USER GROUP
Social Login			
	I	MEDIUM	Guardians
 Examples	Login via Facebook, Twitter, Google, LinkedIn, etc.		
	<i>PRO: Ease of use, Familiarity and user control</i>	<i>CON: Some networks block social, Longer login workflows, Relies on 3rd-party integration, requires social account</i>	
Pictograph			
	II	LOW	Pre-K, Elementary
 Examples	Predefined Custom or Sample Pictures Provided During Authentication		
	<i>PRO: Ease of access for young/special needs students, Easy administration</i>	<i>CON: Requires enrollment</i>	
SMS			
	II	LOW	Faculty, Staff, HS
 Examples	OTP Sent via Mobile Number		
	<i>PRO: User convenience, doesn't require smartphone or app</i>	<i>CON: Can be intercepted/spoofed</i>	
QR Code			
	II	LOW	Pre-K, Elementary
 Examples	Printed QR Code Presented to Embedded or External Web Camera		
	<i>PRO: Easy to access and administrate, student-friendly</i>	<i>CON: Need device/hardware to authenticate code</i>	
Security Questions			
	I	LOW	Secondary/Alt Factor
 Examples	User Verifies Identity By Answering Predefined Secret Questions		
	<i>PRO: Traditional user experience, Secondary/Alt. factor</i>	<i>CON: Vulnerable to social engineering/guessing, can be forgotten</i>	
Password or Passphrase			
	I	LOWEST	Default
 Examples	LDAP-Based Password		
	<i>PRO: Traditional user experience</i>	<i>CON: Single-factor, can be forgotten, most likely to be compromised</i>	

