

AZ-400

1. Processes & Communication (10–15%)

- GitHub Flow, feedback cycles (notifications, issues)
- Integrate GitHub Projects, Azure Boards, repos; trace source, bugs, quality
- Dashboards: cycle time, recovery, lead time; metrics for planning, dev, test, sec, ops
- Wikis, diagrams (.md, Mermaid); release/API docs; auto-doc from Git; webhooks, Boards, Teams

2. Source Control (10–15%)

- Branching: trunk, feature, release; PR workflows, policies; branch protections, merge rules
- Repos: large files (LFS), scaling (Scalar); permissions, tags; data recovery
- Package management: GitHub/Azure; feeds, views; versioning (SemVer, CalVer); pipeline artifacts

3. Build & Release (50–55%)

- Package/testing strategies; quality/release gates; integrate unit, integration, load tests; code cov.
- Pipelines: GitHub Actions, Azure Pipelines; runners, integration, triggers, YAML
- Advanced: hybrid pipelines, self-hosted agents, VM templates; reusable YAML, tasks; approvals
- Deployment: blue-green, canary, ring, A/B; handle dependencies; minimize downtime; hotfixes
- Solutions: feature flags, container/binary/DB deployments; config management
- IaC: strategy, automation; Bicep, ARM, DSC; Azure Deployment Environments
- Maintain pipelines: monitor health, optimize cost/time, manage artifacts, migrate to YAML

4. Security & Compliance (10–15%)

- Auth: Service Principals, Managed Identity, GitHub Apps/tokens, Azure connections
- Access: DevOps permissions, security groups, access levels, project/team configs
- Secrets: Azure Key Vault, GitHub/Azure secrets, secure files, prevent data leaks
- Scanning: dependencies, code, secrets, licenses; Defender, Advanced Security, CodeQL, containers, Dependabot

5. Instrumentation (5–10%)

- Monitoring: Azure Monitor, Log Analytics, App/Infra Insights
- Alerts: GitHub insights, charts, pipeline alerts
- Metrics: CPU, memory, disk, network; app performance; tracing; KQL basics