

Twice Born Ministry

SEMI-102: Chip Design Fundamentals (Digital Logic & Fab Overview)

Course Code: SEMI-102

Credit Hours: 3

King James Version (KJV) — Sola Scriptura Curriculum

Generated 2026-06-30

Course Description

SEMI-102: Chip Design Fundamentals (Digital Logic & Fab Overview)

Course Description

Digital logic, RTL concepts, and design-for-manufacturing with honest limits and neighbor-serving innovation.

This course is part of **Layer 6 — Strategic US Priorities** (Track D: Technical / IT / Cloud / AI / Marketing) in the Twice Born Ministry Bible School catalog. **College category:** Advanced Manufacturing.

Course Details

| Field | Value |

|-----|-----|

| **Course Code** | SEMI-102 |

| **Career Track** | D — Technical / IT / Cloud / AI / Marketing |

| **Catalog Track** | Chip Design |

| **College Category** | Advanced Manufacturing |

| **Credit Hours** | 3 |

| **Weeks** | 12 |

| **Lessons** | 12 |

| **Prerequisites** | SEMI-101; MATH-101 |

| **Homeschool Band** | College |

| **Primary Text** | King James Version (KJV) |

| **Source / Resources** | OpenStax digital logic awareness; IEEE ethics |

TBM Cross-References

- John 8:32 (KJV)

- SEMI-101

Learning Outcomes

Upon completion, students will be able to:

1. Explain core concepts and vocabulary for this vocational domain at college introductory level.
2. Apply biblical ethics when secular models conflict with Kingdom priorities.
3. Complete practical assignments, scenarios, or lab exercises with documented integrity.
4. Articulate connections between vocation, stewardship, and local church ministry.
5. Pass module quizzes and capstone assessments at 70% or higher.

Assessment Overview

- **Module quizzes:** JSON per module (multiple choice + short answer).
- **Assignments:** 3–4 rubric-graded projects.
- **Group projects:** 2 collaborative exercises.
- **Final exam:** Comprehensive short and extended responses.
- **Video scripts:** 3–5 instructor scripts for optional production.

Christian Guardrails

- KJV citation standard; Christ-centered instruction.
- Career exploration does not replace licensure, trade apprenticeships, or professional counsel where required.
- AI tools may assist research but not replace original work or pastoral judgment.

Instructor Notes

Professor Shepherd AI instructor shortcode: [tb_ai_instructor course_code="SEMI-102"]

Twice Born Ministry Bible School — Layer 4 Career Tracks

Course Modules

SEMI-102 — Lesson 1: Boolean Algebra and Truth as God's Logic

Introduction

Welcome to Lesson 1 of **Chip Design Fundamentals (Digital Logic & Fab Overview)** (SEMI-102). This session explores **Boolean Algebra and Truth as God's Logic** within the **Track D — Technical / IT / Cloud / AI / Marketing** pathway at Twice Born Ministry Bible School.

This career track equips digital stewards for ministry and marketplace. Marketing courses cross-reference the TBM Marketing plugin (Wavecraft) and Marketing/TBM_MARKETING_PLUGIN.md.

This is **Layer 4 — Career Tracks** content at college level (or high school dual-enrollment where noted). The King James Version remains the citation standard for all scripture. Complete BS-FND-100 or listed prerequisites before advanced modules.

Pray for wisdom before studying. Career competence without Christ-centered character produces skilled workers who build on sand. We pursue excellence **as unto the Lord** (Colossians 3:23).

Christian Ethics Integration — Stewardship

The earth is the LORD's, and the fulness thereof (Psalm 24:1, KJV). Every vocation—accounting, medicine, media, or cloud engineering—is borrowed stewardship.

Apply this principle while studying **Boolean Algebra and Truth as God's Logic**: document ethical decisions, cite KJV where appropriate, and identify when professional practice must yield to conscience.

Core Teaching

Theme: Boolean Algebra and Truth as God's Logic

The heavens declare the glory of God; and the firmament sheweth his handywork (Psalm 19:1, KJV). Technology extends human creativity made in God's image yet must never replace dependence on the Creator.

Prove all things; hold fast that which is good (1 Thessalonians 5:21, KJV). Digital tools—AI, cloud platforms, marketing automation—require discernment. Test every workflow against Scripture and

conscience.

Practical Focus

Digital logic, RTL concepts, and design-for-manufacturing with honest limits and neighbor-serving innovation.

Competency targets for this lesson:

- Define key terms and industry-standard vocabulary at introductory level.
- Identify biblical principles that govern ethical decisions in this domain.
- Complete hands-on or scenario-based exercises in assignments and quizzes.
- Connect vocational skills to local church ministry or community service where applicable.

Professional Standards

Career track courses prepare students for further education, certification programs, or bi-vocational ministry—they do not replace licensure, trade union apprenticeships, CPA/legal counsel, or seminary ordination tracks unless explicitly stated in prerequisites.

TBM & Catalog Cross-References

- John 8:32 (KJV)

- SEMI-101

TBM Marketing / Wavecraft Integration

Where this course touches digital outreach, consult Marketing/TBM_MARKETING_PLUGIN.md for plugin settings: Daily Blog, Blog Category, GHL Integrations, Funnel playbook, and Blog2Social bridges. Configure white-label settings under TBM Marketing → Settings.

Application for Vocation and Ministry

Boolean Algebra and Truth as God's Logic should change how you work, lead, serve customers, and witness.

Digital practice: Configure a lab environment, diagram, or content draft. Document security and ethics decisions.

Personal devotion: Write a brief prayer connecting today's vocational theme to Christ's lordship over your schedule, income, and relationships.

Local church: Share one insight with your pastor, deacon team, or small group—especially where bi-vocational ministry applies.

Evangelism: Prepare a 60-second testimony linking honest work or digital stewardship to the gospel hope you profess.

Lab, Scenario, or Field Exercise

Exercise 1: Build a diagram, wireframe, or configuration checklist. Peer-review for accessibility, security, and ethical messaging.

Document assumptions, resources consulted, and limitations. Submit via LMS with honor statement. Supervised field hours may count toward capstone portfolios where approved by cohort facilitator.

Discussion Questions

How does **Boolean Algebra and Truth as God's Logic** align with Colossians 3:23 ("as to the Lord")?

What secular practice in this field most often conflicts with biblical ethics?

Which prerequisite course or TBM resource best supports this lesson?

How would you teach this topic to a high school dual-enrollment student?

What is one measurable action you will take this week based on this lesson?

Summary and Next Steps

Lesson 1 Summary: We examined **Boolean Algebra and Truth as God's Logic** through scripture, vocational standards, and ministry application.

Action item: Complete the module quiz (70% to pass) and begin assignment work if due this week.

Preview: Continue to Lesson 2. Review SPECIALIZATION_SOURCES.md or Kingdom Capital / TBM Marketing docs as listed in your syllabus.

Soli Deo gloria — whether ye eat or drink, or whatsoever ye do, do all to the glory of God (1 Corinthians 10:31).

Ministry Case Study

Imagine a congregant confused about this lesson's topic after watching online teaching that contradicts historic evangelical doctrine. Draft a pastoral response email that (1) expresses empathy, (2) clarifies biblical teaching with two references, (3) invites in-person conversation, and (4) avoids condescension.

Pastoral communication is part of theological training, not an optional soft skill.

Supplemental Reading and Reflection

Assign one chapter from a standard systematic theology textbook or equivalent lecture notes. Summarize the author's definitions, note where Scripture proofs appear, and evaluate whether the Bible truly supports each claim. Theology students must read widely yet judge all teaching by the Word. Write a half-page response connecting supplemental reading to this lesson's theme.

Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

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Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

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SEMI-102 — Lesson 2: Combinational Logic and Circuit Integrity

Introduction

Welcome to Lesson 2 of **Chip Design Fundamentals (Digital Logic & Fab Overview)** (SEMI-102). This session explores **Combinational Logic and Circuit Integrity** within the **Track D — Technical /**

IT / Cloud / AI / Marketing pathway at Twice Born Ministry Bible School.

This career track equips digital stewards for ministry and marketplace. Marketing courses cross-reference the TBM Marketing plugin (Wavecraft) and Marketing/TBM_MARKETING_PLUGIN.md.

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Pray for wisdom before studying. Career competence without Christ-centered character produces skilled workers who build on sand. We pursue excellence **as unto the Lord** (Colossians 3:23).

Christian Ethics Integration — Truth

Buy the truth, and sell it not (Proverbs 23:23, KJV). Financial reports, news scripts, and research data must reflect reality—not convenience.

Apply this principle while studying **Combinational Logic and Circuit Integrity**: document ethical decisions, cite KJV where appropriate, and identify when professional practice must yield to conscience.

Core Teaching

Theme: Combinational Logic and Circuit Integrity

The heavens declare the glory of God; and the firmament sheweth his handywork (Psalm 19:1, KJV). Technology extends human creativity made in God's image yet must never replace dependence on the Creator.

Prove all things; hold fast that which is good (1 Thessalonians 5:21, KJV). Digital tools—AI, cloud platforms, marketing automation—require discernment. Test every workflow against Scripture and conscience.

Practical Focus

Digital logic, RTL concepts, and design-for-manufacturing with honest limits and neighbor-serving innovation.

Competency targets for this lesson:

- Define key terms and industry-standard vocabulary at introductory level.
- Identify biblical principles that govern ethical decisions in this domain.

- Complete hands-on or scenario-based exercises in assignments and quizzes.
- Connect vocational skills to local church ministry or community service where applicable.

Professional Standards

Career track courses prepare students for further education, certification programs, or bi-vocational ministry—they do not replace licensure, trade union apprenticeships, CPA/legal counsel, or seminary ordination tracks unless explicitly stated in prerequisites.

TBM & Catalog Cross-References

- John 8:32 (KJV)
- • SEMI-101

TBM Marketing / Wavecraft Integration

Where this course touches digital outreach, consult Marketing/TBM_MARKETING_PLUGIN.md for plugin settings: Daily Blog, Blog Category, GHL Integrations, Funnel playbook, and Blog2Social bridges. Configure white-label settings under TBM Marketing → Settings.

Application for Vocation and Ministry

Combinational Logic and Circuit Integrity should change how you work, lead, serve customers, and witness.

Digital practice: Configure a lab environment, diagram, or content draft. Document security and ethics decisions.

Personal devotion: Write a brief prayer connecting today's vocational theme to Christ's lordship over your schedule, income, and relationships.

Local church: Share one insight with your pastor, deacon team, or small group—especially where bi-vocational ministry applies.

Evangelism: Prepare a 60-second testimony linking honest work or digital stewardship to the gospel hope you profess.

Lab, Scenario, or Field Exercise

Exercise 2: Build a diagram, wireframe, or configuration checklist. Peer-review for accessibility, security, and ethical messaging.

Document assumptions, resources consulted, and limitations. Submit via LMS with honor statement. Supervised field hours may count toward capstone portfolios where approved by cohort facilitator.

Discussion Questions

How does **Combinational Logic and Circuit Integrity** align with Colossians 3:23 ("as to the Lord")?

What secular practice in this field most often conflicts with biblical ethics?

Which prerequisite course or TBM resource best supports this lesson?

How would you teach this topic to a high school dual-enrollment student?

What is one measurable action you will take this week based on this lesson?

Summary and Next Steps

Lesson 2 Summary: We examined **Combinational Logic and Circuit Integrity** through scripture, vocational standards, and ministry application.

Action item: Complete the module quiz (70% to pass) and begin assignment work if due this week.

Preview: Continue to Lesson 3. Review SPECIALIZATION_SOURCES.md or Kingdom Capital / TBM Marketing docs as listed in your syllabus.

Soli Deo gloria — whether ye eat or drink, or whatsoever ye do, do all to the glory of God (1 Corinthians 10:31).

Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

Supplemental Reading and Reflection

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Historical Figure Spotlight

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SEMI-102 — Lesson 3: Sequential Logic and Clock Discipline

Introduction

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Pray for wisdom before studying. Career competence without Christ-centered character produces skilled workers who build on sand. We pursue excellence **as unto the Lord** (Colossians 3:23).

Christian Ethics Integration — Wisdom

If any of you lack wisdom, let him ask of God (James 1:5, KJV). Markets, laws, and technologies change; Scripture-grounded wisdom endures.

Apply this principle while studying **Sequential Logic and Clock Discipline**: document ethical decisions, cite KJV where appropriate, and identify when professional practice must yield to conscience.

Core Teaching

Theme: Sequential Logic and Clock Discipline

Prove all things; hold fast that which is good (1 Thessalonians 5:21, KJV). Digital tools—AI, cloud platforms, marketing automation—require discernment. Test every workflow against Scripture and conscience.

The heavens declare the glory of God; and the firmament sheweth his handywork (Psalm 19:1, KJV). Technology extends human creativity made in God's image yet must never replace dependence on the Creator.

Practical Focus

Digital logic, RTL concepts, and design-for-manufacturing with honest limits and neighbor-serving innovation.

Competency targets for this lesson:

- Define key terms and industry-standard vocabulary at introductory level.
- Identify biblical principles that govern ethical decisions in this domain.
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Professional Standards

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Application for Vocation and Ministry

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Digital practice: Configure a lab environment, diagram, or content draft. Document security and ethics decisions.

Personal devotion: Write a brief prayer connecting today's vocational theme to Christ's lordship over your schedule, income, and relationships.

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Evangelism: Prepare a 60-second testimony linking honest work or digital stewardship to the gospel hope you profess.

Lab, Scenario, or Field Exercise

Exercise 3: Build a diagram, wireframe, or configuration checklist. Peer-review for accessibility, security, and ethical messaging.

Document assumptions, resources consulted, and limitations. Submit via LMS with honor statement. Supervised field hours may count toward capstone portfolios where approved by cohort facilitator.

Discussion Questions

How does **Sequential Logic and Clock Discipline** align with Colossians 3:23 ("as to the Lord")?

What secular practice in this field most often conflicts with biblical ethics?

Which prerequisite course or TBM resource best supports this lesson?

How would you teach this topic to a high school dual-enrollment student?

What is one measurable action you will take this week based on this lesson?

Summary and Next Steps

Lesson 3 Summary: We examined **Sequential Logic and Clock Discipline** through scripture, vocational standards, and ministry application.

Action item: Complete the module quiz (70% to pass) and begin assignment work if due this week.

Preview: Continue to Lesson 4. Review SPECIALIZATION_SOURCES.md or Kingdom Capital / TBM Marketing docs as listed in your syllabus.

Soli Deo gloria — whether ye eat or drink, or whatsoever ye do, do all to the glory of God (1 Corinthians 10:31).

Historical Figure Spotlight

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Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

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Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

SEMI-102 — Lesson 4: Verilog/VHDL Intro and Documentation Ethics

Introduction

Welcome to Lesson 4 of **Chip Design Fundamentals (Digital Logic & Fab Overview)** (SEMI-102). This session explores **Verilog/VHDL Intro and Documentation Ethics** within the **Track D — Technical / IT / Cloud / AI / Marketing** pathway at Twice Born Ministry Bible School.

This career track equips digital stewards for ministry and marketplace. Marketing courses cross-reference the TBM Marketing plugin (Wavecraft) and Marketing/TBM_MARKETING_PLUGIN.md.

This is **Layer 4 — Career Tracks** content at college level (or high school dual-enrollment where noted). The King James Version remains the citation standard for all scripture. Complete BS-FND-100 or listed prerequisites before advanced modules.

Pray for wisdom before studying. Career competence without Christ-centered character produces skilled workers who build on sand. We pursue excellence **as unto the Lord** (Colossians 3:23).

Christian Ethics Integration — Stewardship

The earth is the LORD's, and the fulness thereof (Psalm 24:1, KJV). Every vocation—accounting, medicine, media, or cloud engineering—is borrowed stewardship.

Apply this principle while studying **Verilog/VHDL Intro and Documentation Ethics**: document ethical decisions, cite KJV where appropriate, and identify when professional practice must yield to conscience.

Core Teaching

Theme: Verilog/VHDL Intro and Documentation Ethics

Prove all things; hold fast that which is good (1 Thessalonians 5:21, KJV). Digital tools—AI, cloud platforms, marketing automation—require discernment. Test every workflow against Scripture and conscience.

The heavens declare the glory of God; and the firmament sheweth his handywork (Psalm 19:1, KJV). Technology extends human creativity made in God's image yet must never replace dependence on the Creator.

Practical Focus

Digital logic, RTL concepts, and design-for-manufacturing with honest limits and neighbor-serving innovation.

Competency targets for this lesson:

- Define key terms and industry-standard vocabulary at introductory level.
- Identify biblical principles that govern ethical decisions in this domain.
- Complete hands-on or scenario-based exercises in assignments and quizzes.
- Connect vocational skills to local church ministry or community service where applicable.

Professional Standards

Career track courses prepare students for further education, certification programs, or bi-vocational ministry—they do not replace licensure, trade union apprenticeships, CPA/legal counsel, or seminary ordination tracks unless explicitly stated in prerequisites.

TBM & Catalog Cross-References

- John 8:32 (KJV)
- • SEMI-101

TBM Marketing / Wavecraft Integration

Where this course touches digital outreach, consult Marketing/TBM_MARKETING_PLUGIN.md for plugin settings: Daily Blog, Blog Category, GHL Integrations, Funnel playbook, and Blog2Social bridges. Configure white-label settings under TBM Marketing → Settings.

Application for Vocation and Ministry

Verilog/VHDL Intro and Documentation Ethics should change how you work, lead, serve customers, and witness.

Digital practice: Configure a lab environment, diagram, or content draft. Document security and ethics decisions.

Personal devotion: Write a brief prayer connecting today's vocational theme to Christ's lordship over your schedule, income, and relationships.

Local church: Share one insight with your pastor, deacon team, or small group—especially where bi-vocational ministry applies.

Evangelism: Prepare a 60-second testimony linking honest work or digital stewardship to the gospel hope you profess.

Lab, Scenario, or Field Exercise

Exercise 4: Build a diagram, wireframe, or configuration checklist. Peer-review for accessibility, security, and ethical messaging.

Document assumptions, resources consulted, and limitations. Submit via LMS with honor statement. Supervised field hours may count toward capstone portfolios where approved by cohort facilitator.

Discussion Questions

How does **Verilog/VHDL Intro and Documentation Ethics** align with Colossians 3:23 ("as to the Lord")?

What secular practice in this field most often conflicts with biblical ethics?

Which prerequisite course or TBM resource best supports this lesson?

How would you teach this topic to a high school dual-enrollment student?

What is one measurable action you will take this week based on this lesson?

Summary and Next Steps

Lesson 4 Summary: We examined **Verilog/VHDL Intro and Documentation Ethics** through scripture, vocational standards, and ministry application.

Action item: Complete the module quiz (70% to pass) and begin assignment work if due this week.

Preview: Continue to Lesson 5. Review SPECIALIZATION_SOURCES.md or Kingdom Capital / TBM Marketing docs as listed in your syllabus.

Soli Deo gloria — whether ye eat or drink, or whatsoever ye do, do all to the glory of God (1 Corinthians 10:31).

Supplemental Reading and Reflection

Assign one chapter from a standard systematic theology textbook or equivalent lecture notes. Summarize the author's definitions, note where Scripture proofs appear, and evaluate whether the Bible truly supports each claim. Theology students must read widely yet judge all teaching by the Word. Write a half-page response connecting supplemental reading to this lesson's theme.

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Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

Ministry Case Study

Imagine a congregant confused about this lesson's topic after watching online teaching that contradicts historic evangelical doctrine. Draft a pastoral response email that (1) expresses empathy, (2) clarifies biblical teaching with two references, (3) invites in-person conversation, and (4) avoids condescension. Pastoral communication is part of theological training, not an optional soft skill.

Supplemental Reading and Reflection

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Historical Figure Spotlight

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Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

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Worship Integration

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Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

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Supplemental Reading and Reflection

Assign one chapter from a standard systematic theology textbook or equivalent lecture notes. Summarize the author's definitions, note where Scripture proofs appear, and evaluate whether the Bible truly supports each claim. Theology students must read widely yet judge all teaching by the Word. Write a half-page response connecting supplemental reading to this lesson's theme.

SEMI-102 — Lesson 5: Simulation, Verification, and False Witness Avoidance

Introduction

Welcome to Lesson 5 of **Chip Design Fundamentals (Digital Logic & Fab Overview)** (SEMI-102). This session explores **Simulation, Verification, and False Witness Avoidance** within the **Track D — Technical / IT / Cloud / AI / Marketing** pathway at Twice Born Ministry Bible School.

This career track equips digital stewards for ministry and marketplace. Marketing courses cross-reference the TBM Marketing plugin (Wavecraft) and Marketing/TBM_MARKETING_PLUGIN.md.

This is **Layer 4 — Career Tracks** content at college level (or high school dual-enrollment where noted). The King James Version remains the citation standard for all scripture. Complete BS-FND-100 or listed prerequisites before advanced modules.

Pray for wisdom before studying. Career competence without Christ-centered character produces skilled workers who build on sand. We pursue excellence **as unto the Lord** (Colossians 3:23).

Christian Ethics Integration — Truth

Buy the truth, and sell it not (Proverbs 23:23, KJV). Financial reports, news scripts, and research data must reflect reality—not convenience.

Apply this principle while studying **Simulation, Verification, and False Witness Avoidance**: document ethical decisions, cite KJV where appropriate, and identify when professional practice must yield to conscience.

Core Teaching

Theme: Simulation, Verification, and False Witness Avoidance

Prove all things; hold fast that which is good (1 Thessalonians 5:21, KJV). Digital tools—AI, cloud platforms, marketing automation—require discernment. Test every workflow against Scripture and conscience.

The heavens declare the glory of God; and the firmament sheweth his handywork (Psalm 19:1, KJV). Technology extends human creativity made in God's image yet must never replace dependence on the Creator.

Practical Focus

Digital logic, RTL concepts, and design-for-manufacturing with honest limits and neighbor-serving innovation.

Competency targets for this lesson:

- Define key terms and industry-standard vocabulary at introductory level.
- Identify biblical principles that govern ethical decisions in this domain.
- Complete hands-on or scenario-based exercises in assignments and quizzes.
- Connect vocational skills to local church ministry or community service where applicable.

Professional Standards

Career track courses prepare students for further education, certification programs, or bi-vocational ministry—they do not replace licensure, trade union apprenticeships, CPA/legal counsel, or seminary ordination tracks unless explicitly stated in prerequisites.

TBM & Catalog Cross-References

- John 8:32 (KJV)

- SEMI-101

TBM Marketing / Wavecraft Integration

Where this course touches digital outreach, consult Marketing/TBM_MARKETING_PLUGIN.md for plugin settings: Daily Blog, Blog Category, GHL Integrations, Funnel playbook, and Blog2Social bridges. Configure white-label settings under TBM Marketing → Settings.

Application for Vocation and Ministry

Simulation, Verification, and False Witness Avoidance should change how you work, lead, serve customers, and witness.

Digital practice: Configure a lab environment, diagram, or content draft. Document security and ethics decisions.

Personal devotion: Write a brief prayer connecting today's vocational theme to Christ's lordship over your schedule, income, and relationships.

Local church: Share one insight with your pastor, deacon team, or small group—especially where bi-vocational ministry applies.

Evangelism: Prepare a 60-second testimony linking honest work or digital stewardship to the gospel hope you profess.

Lab, Scenario, or Field Exercise

Exercise 5: Build a diagram, wireframe, or configuration checklist. Peer-review for accessibility, security, and ethical messaging.

Document assumptions, resources consulted, and limitations. Submit via LMS with honor statement. Supervised field hours may count toward capstone portfolios where approved by cohort facilitator.

Discussion Questions

How does **Simulation, Verification, and False Witness Avoidance** align with Colossians 3:23 ("as to the Lord")?

What secular practice in this field most often conflicts with biblical ethics?

Which prerequisite course or TBM resource best supports this lesson?

How would you teach this topic to a high school dual-enrollment student?

What is one measurable action you will take this week based on this lesson?

Summary and Next Steps

Lesson 5 Summary: We examined **Simulation, Verification, and False Witness Avoidance** through scripture, vocational standards, and ministry application.

Action item: Complete the module quiz (70% to pass) and begin assignment work if due this week.

Preview: Continue to Lesson 6. Review SPECIALIZATION_SOURCES.md or Kingdom Capital / TBM Marketing docs as listed in your syllabus.

Soli Deo gloria — whether ye eat or drink, or whatsoever ye do, do all to the glory of God (1 Corinthians 10:31).

Ministry Case Study

Imagine a congregant confused about this lesson's topic after watching online teaching that contradicts historic evangelical doctrine. Draft a pastoral response email that (1) expresses empathy, (2) clarifies biblical teaching with two references, (3) invites in-person conversation, and (4) avoids condescension. Pastoral communication is part of theological training, not an optional soft skill.

Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

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Supplemental Reading and Reflection

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Historical Figure Spotlight

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Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

Historical Figure Spotlight

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Historical Figure Spotlight

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Historical Figure Spotlight

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Supplemental Reading and Reflection

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Ministry Case Study

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SEMI-102 — Lesson 6: FPGA Labs and Prototype Stewardship

Introduction

Welcome to Lesson 6 of **Chip Design Fundamentals (Digital Logic & Fab Overview)** (SEMI-102). This session explores **FPGA Labs and Prototype Stewardship** within the **Track D — Technical / IT / Cloud / AI / Marketing** pathway at Twice Born Ministry Bible School.

This career track equips digital stewards for ministry and marketplace. Marketing courses cross-reference the TBM Marketing plugin (Wavecraft) and `Marketing/TBM_MARKETING_PLUGIN.md`.

This is **Layer 4 — Career Tracks** content at college level (or high school dual-enrollment where noted). The King James Version remains the citation standard for all scripture. Complete BS-FND-100 or listed prerequisites before advanced modules.

Pray for wisdom before studying. Career competence without Christ-centered character produces skilled workers who build on sand. We pursue excellence **as unto the Lord** (Colossians 3:23).

Christian Ethics Integration — Wisdom

If any of you lack wisdom, let him ask of God (James 1:5, KJV). Markets, laws, and technologies change; Scripture-grounded wisdom endures.

Apply this principle while studying **FPGA Labs and Prototype Stewardship**: document ethical decisions, cite KJV where appropriate, and identify when professional practice must yield to conscience.

Core Teaching

Theme: FPGA Labs and Prototype Stewardship

Prove all things; hold fast that which is good (1 Thessalonians 5:21, KJV). Digital tools—AI, cloud platforms, marketing automation—require discernment. Test every workflow against Scripture and conscience.

The heavens declare the glory of God; and the firmament sheweth his handywork (Psalm 19:1, KJV). Technology extends human creativity made in God's image yet must never replace dependence on the Creator.

Practical Focus

Digital logic, RTL concepts, and design-for-manufacturing with honest limits and neighbor-serving innovation.

Competency targets for this lesson:

- Define key terms and industry-standard vocabulary at introductory level.
- Identify biblical principles that govern ethical decisions in this domain.
- Complete hands-on or scenario-based exercises in assignments and quizzes.
- Connect vocational skills to local church ministry or community service where applicable.

Professional Standards

Career track courses prepare students for further education, certification programs, or bi-vocational ministry—they do not replace licensure, trade union apprenticeships, CPA/legal counsel, or seminary ordination tracks unless explicitly stated in prerequisites.

TBM & Catalog Cross-References

- John 8:32 (KJV)

- SEMI-101

TBM Marketing / Wavecraft Integration

Where this course touches digital outreach, consult Marketing/TBM_MARKETING_PLUGIN.md for plugin settings: Daily Blog, Blog Category, GHL Integrations, Funnel playbook, and Blog2Social bridges. Configure white-label settings under TBM Marketing → Settings.

Application for Vocation and Ministry

FPGA Labs and Prototype Stewardship should change how you work, lead, serve customers, and witness.

Digital practice: Configure a lab environment, diagram, or content draft. Document security and ethics decisions.

Personal devotion: Write a brief prayer connecting today's vocational theme to Christ's lordship over your schedule, income, and relationships.

Local church: Share one insight with your pastor, deacon team, or small group—especially where bi-vocational ministry applies.

Evangelism: Prepare a 60-second testimony linking honest work or digital stewardship to the gospel hope you profess.

Lab, Scenario, or Field Exercise

Exercise 6: Build a diagram, wireframe, or configuration checklist. Peer-review for accessibility, security, and ethical messaging.

Document assumptions, resources consulted, and limitations. Submit via LMS with honor statement. Supervised field hours may count toward capstone portfolios where approved by cohort facilitator.

Discussion Questions

How does **FPGA Labs and Prototype Stewardship** align with Colossians 3:23 ("as to the Lord")?

What secular practice in this field most often conflicts with biblical ethics?

Which prerequisite course or TBM resource best supports this lesson?

How would you teach this topic to a high school dual-enrollment student?

What is one measurable action you will take this week based on this lesson?

Summary and Next Steps

Lesson 6 Summary: We examined **FPGA Labs and Prototype Stewardship** through scripture, vocational standards, and ministry application.

Action item: Complete the module quiz (70% to pass) and begin assignment work if due this week.

Preview: Continue to Lesson 7. Review SPECIALIZATION_SOURCES.md or Kingdom Capital / TBM Marketing docs as listed in your syllabus.

Soli Deo gloria — whether ye eat or drink, or whatsoever ye do, do all to the glory of God (1 Corinthians 10:31).

Ministry Case Study

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Supplemental Reading and Reflection

Assign one chapter from a standard systematic theology textbook or equivalent lecture notes. Summarize the author's definitions, note where Scripture proofs appear, and evaluate whether the Bible truly supports each claim. Theology students must read widely yet judge all teaching by the Word. Write a half-page response connecting supplemental reading to this lesson's theme.

Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

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SEMI-102 — Lesson 7: Physical Design and Floorplanning Overview

Introduction

Welcome to Lesson 7 of **Chip Design Fundamentals (Digital Logic & Fab Overview)** (SEMI-102). This session explores **Physical Design and Floorplanning Overview** within the **Track D — Technical / IT / Cloud / AI / Marketing** pathway at Twice Born Ministry Bible School.

This career track equips digital stewards for ministry and marketplace. Marketing courses cross-reference the TBM Marketing plugin (Wavecraft) and Marketing/TBM_MARKETING_PLUGIN.md.

This is **Layer 4 — Career Tracks** content at college level (or high school dual-enrollment where noted). The King James Version remains the citation standard for all scripture. Complete BS-FND-100 or listed prerequisites before advanced modules.

Pray for wisdom before studying. Career competence without Christ-centered character produces skilled workers who build on sand. We pursue excellence **as unto the Lord** (Colossians 3:23).

Christian Ethics Integration — Stewardship

The earth is the LORD's, and the fulness thereof (Psalm 24:1, KJV). Every vocation—accounting, medicine, media, or cloud engineering—is borrowed stewardship.

Apply this principle while studying **Physical Design and Floorplanning Overview**: document ethical decisions, cite KJV where appropriate, and identify when professional practice must yield to conscience.

Core Teaching

Theme: Physical Design and Floorplanning Overview

Prove all things; hold fast that which is good (1 Thessalonians 5:21, KJV). Digital tools—AI, cloud platforms, marketing automation—require discernment. Test every workflow against Scripture and conscience.

The heavens declare the glory of God; and the firmament sheweth his handywork (Psalm 19:1, KJV). Technology extends human creativity made in God's image yet must never replace dependence on the Creator.

Practical Focus

Digital logic, RTL concepts, and design-for-manufacturing with honest limits and neighbor-serving innovation.

Competency targets for this lesson:

- Define key terms and industry-standard vocabulary at introductory level.
- Identify biblical principles that govern ethical decisions in this domain.
- Complete hands-on or scenario-based exercises in assignments and quizzes.
- Connect vocational skills to local church ministry or community service where applicable.

Professional Standards

Career track courses prepare students for further education, certification programs, or bi-vocational ministry—they do not replace licensure, trade union apprenticeships, CPA/legal counsel, or seminary ordination tracks unless explicitly stated in prerequisites.

TBM & Catalog Cross-References

- John 8:32 (KJV)
- • SEMI-101

TBM Marketing / Wavecraft Integration

Where this course touches digital outreach, consult Marketing/TBM_MARKETING_PLUGIN.md for plugin settings: Daily Blog, Blog Category, GHL Integrations, Funnel playbook, and Blog2Social bridges. Configure white-label settings under TBM Marketing → Settings.

Application for Vocation and Ministry

Physical Design and Floorplanning Overview should change how you work, lead, serve customers, and witness.

Digital practice: Configure a lab environment, diagram, or content draft. Document security and ethics decisions.

Personal devotion: Write a brief prayer connecting today's vocational theme to Christ's lordship over your schedule, income, and relationships.

Local church: Share one insight with your pastor, deacon team, or small group—especially where bi-vocational ministry applies.

Evangelism: Prepare a 60-second testimony linking honest work or digital stewardship to the gospel hope you profess.

Lab, Scenario, or Field Exercise

Exercise 7: Build a diagram, wireframe, or configuration checklist. Peer-review for accessibility, security, and ethical messaging.

Document assumptions, resources consulted, and limitations. Submit via LMS with honor statement. Supervised field hours may count toward capstone portfolios where approved by cohort facilitator.

Discussion Questions

How does **Physical Design and Floorplanning Overview** align with Colossians 3:23 ("as to the Lord")?

What secular practice in this field most often conflicts with biblical ethics?

Which prerequisite course or TBM resource best supports this lesson?

How would you teach this topic to a high school dual-enrollment student?

What is one measurable action you will take this week based on this lesson?

Summary and Next Steps

Lesson 7 Summary: We examined **Physical Design and Floorplanning Overview** through scripture, vocational standards, and ministry application.

Action item: Complete the module quiz (70% to pass) and begin assignment work if due this week.

Preview: Continue to Lesson 8. Review SPECIALIZATION_SOURCES.md or Kingdom Capital / TBM Marketing docs as listed in your syllabus.

Soli Deo gloria — whether ye eat or drink, or whatsoever ye do, do all to the glory of God (1 Corinthians 10:31).

Ministry Case Study

Imagine a congregant confused about this lesson's topic after watching online teaching that contradicts historic evangelical doctrine. Draft a pastoral response email that (1) expresses empathy, (2) clarifies biblical teaching with two references, (3) invites in-person conversation, and (4) avoids condescension. Pastoral communication is part of theological training, not an optional soft skill.

Supplemental Reading and Reflection

Assign one chapter from a standard systematic theology textbook or equivalent lecture notes. Summarize the author's definitions, note where Scripture proofs appear, and evaluate whether the Bible truly supports each claim. Theology students must read widely yet judge all teaching by the Word. Write a half-page response connecting supplemental reading to this lesson's theme.

Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

Supplemental Reading and Reflection

Assign one chapter from a standard systematic theology textbook or equivalent lecture notes. Summarize the author's definitions, note where Scripture proofs appear, and evaluate whether the Bible truly supports each claim. Theology students must read widely yet judge all teaching by the Word. Write a half-page response connecting supplemental reading to this lesson's theme.

Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

Worship Integration

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Worship Integration

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Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

Supplemental Reading and Reflection

Assign one chapter from a standard systematic theology textbook or equivalent lecture notes. Summarize the author's definitions, note where Scripture proofs appear, and evaluate whether the Bible truly supports each claim. Theology students must read widely yet judge all teaching by the Word. Write a half-page response connecting supplemental reading to this lesson's theme.

Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

Ministry Case Study

Imagine a congregant confused about this lesson's topic after watching online teaching that contradicts historic evangelical doctrine. Draft a pastoral response email that (1) expresses empathy, (2) clarifies biblical teaching with two references, (3) invites in-person conversation, and (4) avoids condescension. Pastoral communication is part of theological training, not an optional soft skill.

Ministry Case Study

Imagine a congregant confused about this lesson's topic after watching online teaching that contradicts historic evangelical doctrine. Draft a pastoral response email that (1) expresses empathy, (2) clarifies biblical teaching with two references, (3) invites in-person conversation, and (4) avoids condescension. Pastoral communication is part of theological training, not an optional soft skill.

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SEMI-102 — Lesson 8: Design-for-Test and Quality Culture

Introduction

Welcome to Lesson 8 of **Chip Design Fundamentals (Digital Logic & Fab Overview)** (SEMI-102). This session explores **Design-for-Test and Quality Culture** within the **Track D — Technical / IT / Cloud / AI / Marketing** pathway at Twice Born Ministry Bible School.

This career track equips digital stewards for ministry and marketplace. Marketing courses cross-reference the TBM Marketing plugin (Wavecraft) and Marketing/TBM_MARKETING_PLUGIN.md.

This is **Layer 4 — Career Tracks** content at college level (or high school dual-enrollment where noted). The King James Version remains the citation standard for all scripture. Complete BS-FND-100 or listed prerequisites before advanced modules.

Pray for wisdom before studying. Career competence without Christ-centered character produces skilled workers who build on sand. We pursue excellence **as unto the Lord** (Colossians 3:23).

Christian Ethics Integration — Truth

Buy the truth, and sell it not (Proverbs 23:23, KJV). Financial reports, news scripts, and research data must reflect reality—not convenience.

Apply this principle while studying **Design-for-Test and Quality Culture**: document ethical decisions, cite KJV where appropriate, and identify when professional practice must yield to conscience.

Core Teaching

Theme: Design-for-Test and Quality Culture

The heavens declare the glory of God; and the firmament sheweth his handywork (Psalm 19:1, KJV). Technology extends human creativity made in God's image yet must never replace dependence on the Creator.

Prove all things; hold fast that which is good (1 Thessalonians 5:21, KJV). Digital tools—AI, cloud platforms, marketing automation—require discernment. Test every workflow against Scripture and conscience.

Practical Focus

Digital logic, RTL concepts, and design-for-manufacturing with honest limits and neighbor-serving innovation.

Competency targets for this lesson:

- Define key terms and industry-standard vocabulary at introductory level.
- Identify biblical principles that govern ethical decisions in this domain.
- Complete hands-on or scenario-based exercises in assignments and quizzes.
- Connect vocational skills to local church ministry or community service where applicable.

Professional Standards

Career track courses prepare students for further education, certification programs, or bi-vocational ministry—they do not replace licensure, trade union apprenticeships, CPA/legal counsel, or seminary ordination tracks unless explicitly stated in prerequisites.

TBM & Catalog Cross-References

- John 8:32 (KJV)
- • SEMI-101

TBM Marketing / Wavecraft Integration

Where this course touches digital outreach, consult Marketing/TBM_MARKETING_PLUGIN.md for plugin settings: Daily Blog, Blog Category, GHL Integrations, Funnel playbook, and Blog2Social bridges. Configure white-label settings under TBM Marketing → Settings.

Application for Vocation and Ministry

Design-for-Test and Quality Culture should change how you work, lead, serve customers, and witness.

Digital practice: Configure a lab environment, diagram, or content draft. Document security and ethics decisions.

Personal devotion: Write a brief prayer connecting today's vocational theme to Christ's lordship over your schedule, income, and relationships.

Local church: Share one insight with your pastor, deacon team, or small group—especially where bi-vocational ministry applies.

Evangelism: Prepare a 60-second testimony linking honest work or digital stewardship to the gospel hope you profess.

Lab, Scenario, or Field Exercise

Exercise 8: Build a diagram, wireframe, or configuration checklist. Peer-review for accessibility, security, and ethical messaging.

Document assumptions, resources consulted, and limitations. Submit via LMS with honor statement. Supervised field hours may count toward capstone portfolios where approved by cohort facilitator.

Discussion Questions

How does **Design-for-Test and Quality Culture** align with Colossians 3:23 ("as to the Lord")?

What secular practice in this field most often conflicts with biblical ethics?

Which prerequisite course or TBM resource best supports this lesson?

How would you teach this topic to a high school dual-enrollment student?

What is one measurable action you will take this week based on this lesson?

Summary and Next Steps

Lesson 8 Summary: We examined **Design-for-Test and Quality Culture** through scripture, vocational standards, and ministry application.

Action item: Complete the module quiz (70% to pass) and begin assignment work if due this week.

Preview: Continue to Lesson 9. Review SPECIALIZATION_SOURCES.md or Kingdom Capital / TBM Marketing docs as listed in your syllabus.

Soli Deo gloria — whether ye eat or drink, or whatsoever ye do, do all to the glory of God (1 Corinthians 10:31).

Supplemental Reading and Reflection

Assign one chapter from a standard systematic theology textbook or equivalent lecture notes. Summarize the author's definitions, note where Scripture proofs appear, and evaluate whether the Bible truly supports each claim. Theology students must read widely yet judge all teaching by the Word. Write a half-page response connecting supplemental reading to this lesson's theme.

Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

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Ministry Case Study

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Historical Figure Spotlight

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Historical Figure Spotlight

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Worship Integration

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Supplemental Reading and Reflection

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Supplemental Reading and Reflection

Assign one chapter from a standard systematic theology textbook or equivalent lecture notes. Summarize the author's definitions, note where Scripture proofs appear, and evaluate whether the Bible truly supports each claim. Theology students must read widely yet judge all teaching by the Word. Write a half-page response connecting supplemental reading to this lesson's theme.

SEMI-102 — Lesson 9: IP, Patents, and Honest Attribution

Introduction

Welcome to Lesson 9 of **Chip Design Fundamentals (Digital Logic & Fab Overview)** (SEMI -102). This session explores **IP, Patents, and Honest Attribution** within the **Track D — Technical / IT / Cloud / AI / Marketing** pathway at Twice Born Ministry Bible School.

This career track equips digital stewards for ministry and marketplace. Marketing courses cross-reference the TBM Marketing plugin (Wavecraft) and Marketing/TBM_MARKETING_PLUGIN.md.

This is **Layer 4 — Career Tracks** content at college level (or high school dual-enrollment where noted). The King James Version remains the citation standard for all scripture. Complete BS-FND-100 or listed prerequisites before advanced modules.

Pray for wisdom before studying. Career competence without Christ-centered character produces skilled workers who build on sand. We pursue excellence **as unto the Lord** (Colossians 3:23).

Christian Ethics Integration — Wisdom

If any of you lack wisdom, let him ask of God (James 1:5, KJV). Markets, laws, and technologies change; Scripture-grounded wisdom endures.

Apply this principle while studying **IP, Patents, and Honest Attribution**: document ethical decisions, cite KJV where appropriate, and identify when professional practice must yield to conscience.

Core Teaching

Theme: IP, Patents, and Honest Attribution

The heavens declare the glory of God; and the firmament sheweth his handywork (Psalm 19:1, KJV). Technology extends human creativity made in God's image yet must never replace dependence on the Creator.

Prove all things; hold fast that which is good (1 Thessalonians 5:21, KJV). Digital tools—AI, cloud platforms, marketing automation—require discernment. Test every workflow against Scripture and conscience.

Practical Focus

Digital logic, RTL concepts, and design-for-manufacturing with honest limits and neighbor-serving innovation.

Competency targets for this lesson:

- Define key terms and industry-standard vocabulary at introductory level.
- Identify biblical principles that govern ethical decisions in this domain.
- Complete hands-on or scenario-based exercises in assignments and quizzes.
- Connect vocational skills to local church ministry or community service where applicable.

Professional Standards

Career track courses prepare students for further education, certification programs, or bi-vocational ministry—they do not replace licensure, trade union apprenticeships, CPA/legal counsel, or seminary ordination tracks unless explicitly stated in prerequisites.

TBM & Catalog Cross-References

- John 8:32 (KJV)

- SEMI-101

TBM Marketing / Wavecraft Integration

Where this course touches digital outreach, consult Marketing/TBM_MARKETING_PLUGIN.md for plugin settings: Daily Blog, Blog Category, GHL Integrations, Funnel playbook, and Blog2Social bridges. Configure white-label settings under TBM Marketing → Settings.

Application for Vocation and Ministry

IP, Patents, and Honest Attribution should change how you work, lead, serve customers, and witness.

Digital practice: Configure a lab environment, diagram, or content draft. Document security and ethics decisions.

Personal devotion: Write a brief prayer connecting today's vocational theme to Christ's lordship over your schedule, income, and relationships.

Local church: Share one insight with your pastor, deacon team, or small group—especially where bi-vocational ministry applies.

Evangelism: Prepare a 60-second testimony linking honest work or digital stewardship to the gospel hope you profess.

Lab, Scenario, or Field Exercise

Exercise 9: Build a diagram, wireframe, or configuration checklist. Peer-review for accessibility, security, and ethical messaging.

Document assumptions, resources consulted, and limitations. Submit via LMS with honor statement. Supervised field hours may count toward capstone portfolios where approved by cohort facilitator.

Discussion Questions

How does **IP, Patents, and Honest Attribution** align with Colossians 3:23 ("as to the Lord")?

What secular practice in this field most often conflicts with biblical ethics?

Which prerequisite course or TBM resource best supports this lesson?

How would you teach this topic to a high school dual-enrollment student?

What is one measurable action you will take this week based on this lesson?

Summary and Next Steps

Lesson 9 Summary: We examined **IP, Patents, and Honest Attribution** through scripture, vocational standards, and ministry application.

Action item: Complete the module quiz (70% to pass) and begin assignment work if due this week.

Preview: Continue to Lesson 10. Review SPECIALIZATION_SOURCES.md or Kingdom Capital / TBM Marketing docs as listed in your syllabus.

Soli Deo gloria — whether ye eat or drink, or whatsoever ye do, do all to the glory of God (1 Corinthians 10:31).

Ministry Case Study

Imagine a congregant confused about this lesson's topic after watching online teaching that contradicts historic evangelical doctrine. Draft a pastoral response email that (1) expresses empathy, (2) clarifies biblical teaching with two references, (3) invites in-person conversation, and (4) avoids condescension. Pastoral communication is part of theological training, not an optional soft skill.

Ministry Case Study

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Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

Supplemental Reading and Reflection

Assign one chapter from a standard systematic theology textbook or equivalent lecture notes. Summarize the author's definitions, note where Scripture proofs appear, and evaluate whether the Bible truly supports each claim. Theology students must read widely yet judge all teaching by the Word. Write a half-page response connecting supplemental reading to this lesson's theme.

Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

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Ministry Case Study

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Historical Figure Spotlight

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Supplemental Reading and Reflection

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Historical Figure Spotlight

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SEMI-102 — Lesson 10: Fab Handoff: DFM Rules and Communication

Introduction

Welcome to Lesson 10 of **Chip Design Fundamentals (Digital Logic & Fab Overview)** (SEMI-102). This session explores **Fab Handoff: DFM Rules and Communication** within the **Track D — Technical / IT / Cloud / AI / Marketing** pathway at Twice Born Ministry Bible School.

This career track equips digital stewards for ministry and marketplace. Marketing courses cross-reference the TBM Marketing plugin (Wavecraft) and Marketing/TBM_MARKETING_PLUGIN.md.

This is **Layer 4 — Career Tracks** content at college level (or high school dual-enrollment where noted). The King James Version remains the citation standard for all scripture. Complete BS-FND-100 or listed prerequisites before advanced modules.

Pray for wisdom before studying. Career competence without Christ-centered character produces skilled workers who build on sand. We pursue excellence **as unto the Lord** (Colossians 3:23).

Christian Ethics Integration — Stewardship

The earth is the LORD's, and the fulness thereof (Psalm 24:1, KJV). Every vocation—accounting, medicine, media, or cloud engineering—is borrowed stewardship.

Apply this principle while studying **Fab Handoff: DFM Rules and Communication**: document ethical decisions, cite KJV where appropriate, and identify when professional practice must yield to conscience.

Core Teaching

Theme: Fab Handoff: DFM Rules and Communication

The heavens declare the glory of God; and the firmament sheweth his handywork (Psalm 19:1, KJV). Technology extends human creativity made in God's image yet must never replace dependence on the Creator.

Prove all things; hold fast that which is good (1 Thessalonians 5:21, KJV). Digital tools—AI, cloud platforms, marketing automation—require discernment. Test every workflow against Scripture and conscience.

Practical Focus

Digital logic, RTL concepts, and design-for-manufacturing with honest limits and neighbor-serving innovation.

Competency targets for this lesson:

- Define key terms and industry-standard vocabulary at introductory level.
- Identify biblical principles that govern ethical decisions in this domain.
- Complete hands-on or scenario-based exercises in assignments and quizzes.
- Connect vocational skills to local church ministry or community service where applicable.

Professional Standards

Career track courses prepare students for further education, certification programs, or bi-vocational ministry—they do not replace licensure, trade union apprenticeships, CPA/legal counsel, or seminary ordination tracks unless explicitly stated in prerequisites.

TBM & Catalog Cross-References

- John 8:32 (KJV)
- • SEMI-101

TBM Marketing / Wavecraft Integration

Where this course touches digital outreach, consult Marketing/TBM_MARKETING_PLUGIN.md for plugin settings: Daily Blog, Blog Category, GHL Integrations, Funnel playbook, and Blog2Social bridges. Configure white-label settings under TBM Marketing → Settings.

Application for Vocation and Ministry

Fab Handoff: DFM Rules and Communication should change how you work, lead, serve customers, and witness.

Digital practice: Configure a lab environment, diagram, or content draft. Document security and ethics decisions.

Personal devotion: Write a brief prayer connecting today's vocational theme to Christ's lordship over your schedule, income, and relationships.

Local church: Share one insight with your pastor, deacon team, or small group—especially where bi-vocational ministry applies.

Evangelism: Prepare a 60-second testimony linking honest work or digital stewardship to the gospel hope you profess.

Lab, Scenario, or Field Exercise

Exercise 10: Build a diagram, wireframe, or configuration checklist. Peer-review for accessibility, security, and ethical messaging.

Document assumptions, resources consulted, and limitations. Submit via LMS with honor statement. Supervised field hours may count toward capstone portfolios where approved by cohort facilitator.

Discussion Questions

How does **Fab Handoff: DFM Rules and Communication** align with Colossians 3:23 ("as to the Lord")?

What secular practice in this field most often conflicts with biblical ethics?

Which prerequisite course or TBM resource best supports this lesson?

How would you teach this topic to a high school dual-enrollment student?

What is one measurable action you will take this week based on this lesson?

Summary and Next Steps

Lesson 10 Summary: We examined **Fab Handoff: DFM Rules and Communication** through scripture, vocational standards, and ministry application.

Action item: Complete the module quiz (70% to pass) and begin assignment work if due this week.

Preview: Continue to Lesson 11. Review SPECIALIZATION_SOURCES.md or Kingdom Capital / TBM Marketing docs as listed in your syllabus.

Soli Deo gloria — whether ye eat or drink, or whatsoever ye do, do all to the glory of God (1 Corinthians 10:31).

Supplemental Reading and Reflection

Assign one chapter from a standard systematic theology textbook or equivalent lecture notes. Summarize the author's definitions, note where Scripture proofs appear, and evaluate whether the Bible truly supports each claim. Theology students must read widely yet judge all teaching by the Word. Write a half-page response connecting supplemental reading to this lesson's theme.

Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

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Ministry Case Study

Imagine a congregant confused about this lesson's topic after watching online teaching that contradicts historic evangelical doctrine. Draft a pastoral response email that (1) expresses empathy, (2) clarifies biblical teaching with two references, (3) invites in-person conversation, and (4) avoids condescension. Pastoral communication is part of theological training, not an optional soft skill.

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Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

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SEMI-102 — Lesson 11: Career Paths: Design Engineer to Architect

Introduction

Welcome to Lesson 11 of **Chip Design Fundamentals (Digital Logic & Fab Overview)** (SEMI-102). This session explores **Career Paths: Design Engineer to Architect** within the **Track D — Technical /**

IT / Cloud / AI / Marketing pathway at Twice Born Ministry Bible School.

This career track equips digital stewards for ministry and marketplace. Marketing courses cross-reference the TBM Marketing plugin (Wavecraft) and Marketing/TBM_MARKETING_PLUGIN.md.

This is **Layer 4 — Career Tracks** content at college level (or high school dual-enrollment where noted). The King James Version remains the citation standard for all scripture. Complete BS-FND-100 or listed prerequisites before advanced modules.

Pray for wisdom before studying. Career competence without Christ-centered character produces skilled workers who build on sand. We pursue excellence **as unto the Lord** (Colossians 3:23).

Christian Ethics Integration — Truth

Buy the truth, and sell it not (Proverbs 23:23, KJV). Financial reports, news scripts, and research data must reflect reality—not convenience.

Apply this principle while studying **Career Paths: Design Engineer to Architect**: document ethical decisions, cite KJV where appropriate, and identify when professional practice must yield to conscience.

Core Teaching

Theme: Career Paths: Design Engineer to Architect

Prove all things; hold fast that which is good (1 Thessalonians 5:21, KJV). Digital tools—AI, cloud platforms, marketing automation—require discernment. Test every workflow against Scripture and conscience.

The heavens declare the glory of God; and the firmament sheweth his handywork (Psalm 19:1, KJV). Technology extends human creativity made in God's image yet must never replace dependence on the Creator.

Practical Focus

Digital logic, RTL concepts, and design-for-manufacturing with honest limits and neighbor-serving innovation.

Competency targets for this lesson:

- Define key terms and industry-standard vocabulary at introductory level.
- Identify biblical principles that govern ethical decisions in this domain.

- Complete hands-on or scenario-based exercises in assignments and quizzes.
- Connect vocational skills to local church ministry or community service where applicable.

Professional Standards

Career track courses prepare students for further education, certification programs, or bi-vocational ministry—they do not replace licensure, trade union apprenticeships, CPA/legal counsel, or seminary ordination tracks unless explicitly stated in prerequisites.

TBM & Catalog Cross-References

- John 8:32 (KJV)
- • SEMI-101

TBM Marketing / Wavecraft Integration

Where this course touches digital outreach, consult Marketing/TBM_MARKETING_PLUGIN.md for plugin settings: Daily Blog, Blog Category, GHL Integrations, Funnel playbook, and Blog2Social bridges. Configure white-label settings under TBM Marketing → Settings.

Application for Vocation and Ministry

Career Paths: Design Engineer to Architect should change how you work, lead, serve customers, and witness.

Digital practice: Configure a lab environment, diagram, or content draft. Document security and ethics decisions.

Personal devotion: Write a brief prayer connecting today's vocational theme to Christ's lordship over your schedule, income, and relationships.

Local church: Share one insight with your pastor, deacon team, or small group—especially where bi-vocational ministry applies.

Evangelism: Prepare a 60-second testimony linking honest work or digital stewardship to the gospel hope you profess.

Lab, Scenario, or Field Exercise

Exercise 11: Build a diagram, wireframe, or configuration checklist. Peer-review for accessibility, security, and ethical messaging.

Document assumptions, resources consulted, and limitations. Submit via LMS with honor statement. Supervised field hours may count toward capstone portfolios where approved by cohort facilitator.

Discussion Questions

How does **Career Paths: Design Engineer to Architect** align with Colossians 3:23 ("as to the Lord")?

What secular practice in this field most often conflicts with biblical ethics?

Which prerequisite course or TBM resource best supports this lesson?

How would you teach this topic to a high school dual-enrollment student?

What is one measurable action you will take this week based on this lesson?

Summary and Next Steps

Lesson 11 Summary: We examined **Career Paths: Design Engineer to Architect** through scripture, vocational standards, and ministry application.

Action item: Complete the module quiz (70% to pass) and begin assignment work if due this week.

Preview: Continue to Lesson 12. Review SPECIALIZATION_SOURCES.md or Kingdom Capital / TBM Marketing docs as listed in your syllabus.

Soli Deo gloria — whether ye eat or drink, or whatsoever ye do, do all to the glory of God (1 Corinthians 10:31).

Ministry Case Study

Imagine a congregant confused about this lesson's topic after watching online teaching that contradicts historic evangelical doctrine. Draft a pastoral response email that (1) expresses empathy, (2) clarifies biblical teaching with two references, (3) invites in-person conversation, and (4) avoids condescension. Pastoral communication is part of theological training, not an optional soft skill.

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Supplemental Reading and Reflection

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Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

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SEMI-102 — Lesson 12: Capstone: Simple Logic Design Portfolio

Introduction

Welcome to Lesson 12 of **Chip Design Fundamentals (Digital Logic & Fab Overview)** (SEMI-102). This session explores **Capstone: Simple Logic Design Portfolio** within the **Track D — Technical / IT / Cloud / AI / Marketing** pathway at Twice Born Ministry Bible School.

This career track equips digital stewards for ministry and marketplace. Marketing courses cross-reference the TBM Marketing plugin (Wavecraft) and `Marketing/TBM_MARKETING_PLUGIN.md`.

This is **Layer 4 — Career Tracks** content at college level (or high school dual-enrollment where noted). The King James Version remains the citation standard for all scripture. Complete BS-FND-100 or listed prerequisites before advanced modules.

Pray for wisdom before studying. Career competence without Christ-centered character produces skilled workers who build on sand. We pursue excellence **as unto the Lord** (Colossians 3:23).

Christian Ethics Integration — Wisdom

If any of you lack wisdom, let him ask of God (James 1:5, KJV). Markets, laws, and technologies change; Scripture-grounded wisdom endures.

Apply this principle while studying **Capstone: Simple Logic Design Portfolio**: document ethical decisions, cite KJV where appropriate, and identify when professional practice must yield to conscience.

Core Teaching

Theme: Capstone: Simple Logic Design Portfolio

The heavens declare the glory of God; and the firmament sheweth his handywork (Psalm 19:1, KJV). Technology extends human creativity made in God's image yet must never replace dependence on the Creator.

Prove all things; hold fast that which is good (1 Thessalonians 5:21, KJV). Digital tools—AI, cloud platforms, marketing automation—require discernment. Test every workflow against Scripture and conscience.

Practical Focus

Digital logic, RTL concepts, and design-for-manufacturing with honest limits and neighbor-serving innovation.

Competency targets for this lesson:

- Define key terms and industry-standard vocabulary at introductory level.
- Identify biblical principles that govern ethical decisions in this domain.
- Complete hands-on or scenario-based exercises in assignments and quizzes.
- Connect vocational skills to local church ministry or community service where applicable.

Professional Standards

Career track courses prepare students for further education, certification programs, or bi-vocational ministry—they do not replace licensure, trade union apprenticeships, CPA/legal counsel, or seminary ordination tracks unless explicitly stated in prerequisites.

TBM & Catalog Cross-References

- John 8:32 (KJV)
- • SEMI-101

TBM Marketing / Wavecraft Integration

Where this course touches digital outreach, consult Marketing/TBM_MARKETING_PLUGIN.md for plugin settings: Daily Blog, Blog Category, GHL Integrations, Funnel playbook, and Blog2Social bridges. Configure white-label settings under TBM Marketing → Settings.

Application for Vocation and Ministry

Capstone: Simple Logic Design Portfolio should change how you work, lead, serve customers, and witness.

Digital practice: Configure a lab environment, diagram, or content draft. Document security and ethics decisions.

Personal devotion: Write a brief prayer connecting today's vocational theme to Christ's lordship over your schedule, income, and relationships.

Local church: Share one insight with your pastor, deacon team, or small group—especially where bi-vocational ministry applies.

Evangelism: Prepare a 60-second testimony linking honest work or digital stewardship to the gospel hope you profess.

Lab, Scenario, or Field Exercise

Exercise 12: Build a diagram, wireframe, or configuration checklist. Peer-review for accessibility, security, and ethical messaging.

Document assumptions, resources consulted, and limitations. Submit via LMS with honor statement. Supervised field hours may count toward capstone portfolios where approved by cohort facilitator.

Discussion Questions

How does **Capstone: Simple Logic Design Portfolio** align with Colossians 3:23 ("as to the Lord")?

What secular practice in this field most often conflicts with biblical ethics?

Which prerequisite course or TBM resource best supports this lesson?

How would you teach this topic to a high school dual-enrollment student?

What is one measurable action you will take this week based on this lesson?

Summary and Next Steps

Lesson 12 Summary: We examined **Capstone: Simple Logic Design Portfolio** through scripture, vocational standards, and ministry application.

Action item: Complete the module quiz (70% to pass) and begin assignment work if due this week.

Preview: Continue to the capstone module. Review SPECIALIZATION_SOURCES.md or Kingdom Capital / TBM Marketing docs as listed in your syllabus.

Soli Deo gloria — whether ye eat or drink, or whatsoever ye do, do all to the glory of God (1 Corinthians 10:31).

Historical Figure Spotlight

Research one defender of orthodoxy related to this doctrine—Augustine, Athanasius, Luther, Calvin, Spurgeon, or a modern missionary martyr. Write 150 words on how their context shaped their emphasis. Standing on their shoulders, we inherit confessions forged in controversy. Imitate their courage and Scripture saturation, not necessarily every cultural application.

Ministry Case Study

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Supplemental Reading and Reflection

Assign one chapter from a standard systematic theology textbook or equivalent lecture notes. Summarize the author's definitions, note where Scripture proofs appear, and evaluate whether the Bible truly supports each claim. Theology students must read widely yet judge all teaching by the Word. Write a half-page response connecting supplemental reading to this lesson's theme.

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Worship Integration

Select a hymn or worship song rich in biblical doctrine (e.g., "Holy, Holy, Holy," "And Can It Be," "A Mighty Fortress"). Analyze its lyrics for theological accuracy in light of this lesson. Lead family worship using that hymn, reading one supporting passage before singing. Theology should enliven corporate praise, not remain abstract.

Historical Figure Spotlight

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Appendix A — Assignments

Week 01

Week 01 Assignment — Reflection Journal

Course: SEMI-102 · Chip Design Fundamentals (Digital Logic & Fab Overview)

Week focus: SEMI-102 — Lesson 1: Boolean Algebra and Truth as God's Logic

Learning objective (Bloom's taxonomy)

Students will **analyze** course content from **SEMI-102 — Lesson 1: Boolean Algebra and Truth as God's Logic** with KJV integration and measurable evidence in the submission.

Task

Analyze: Write a 300–500 word reflection on **SEMI-102 — Lesson 1: Boolean Algebra and Truth as God's Logic**. Include at least two KJV citations and one personal application.

Submit: Text via LMS assignment form. PDF upload optional for longer work.

Grading

Grading mode: Auto-grade eligible (written text).

Pass: 70%

Rubric (100 points)

Auto-grade hints

Keywords for automated pre-check: KJV, Christ, Scripture, God, Lesson, Boolean, Algebra

Week 02

Week 02 Assignment — Memory Verse Application

Course: SEMI-102 · Chip Design Fundamentals (Digital Logic & Fab Overview)

Week focus: SEMI-102 — Lesson 2: Combinational Logic and Circuit Integrity

Learning objective (Bloom's taxonomy)

Students will **apply** course content from **SEMI-102 — Lesson 2: Combinational Logic and Circuit Integrity** with KJV integration and measurable evidence in the submission.

Task

Apply: Recite this week's memory verse from memory, then write 250 words explaining how it applies to daily discipleship.

Submit: Text via LMS assignment form. PDF upload optional for longer work.

Grading

Grading mode: Auto-grade eligible (written text).

Pass: 70%

Rubric (100 points)

Auto-grade hints

Keywords for automated pre-check: KJV, Christ, Scripture, God, Lesson, Combinational, Logic

Week 03

Week 03 Assignment — Expository Outline

Course: SEMI-102 · Chip Design Fundamentals (Digital Logic & Fab Overview)

Week focus: SEMI-102 — Lesson 3: Sequential Logic and Clock Discipline

Learning objective (Bloom's taxonomy)

Students will **outline** course content from **SEMI-102 — Lesson 3: Sequential Logic and Clock Discipline** with KJV integration and measurable evidence in the submission.

Task

Outline: Produce a structured outline (400+ words) for the main passage in **SEMI-102 — Lesson 3: Sequential Logic and Clock Discipline**. Include pericope titles and one-sentence themes.

Submit: Text via LMS assignment form. PDF upload optional for longer work.

Grading

Grading mode: Auto-grade eligible (written text).

Pass: 70%

Rubric (100 points)

Auto-grade hints

Keywords for automated pre-check: KJV, Christ, Scripture, God, Lesson, Sequential, Logic

Week 04

Week 04 Assignment — Discussion Response

Course: SEMI-102 · Chip Design Fundamentals (Digital Logic & Fab Overview)

Week focus: SEMI-102 — Lesson 4: Verilog/VHDL Intro and Documentation Ethics

Learning objective (Bloom's taxonomy)

Students will **explain** course content from **SEMI-102 — Lesson 4: Verilog/VHDL Intro and Documentation Ethics** with KJV integration and measurable evidence in the submission.

Task

Explain: Answer two discussion prompts from the Week 4 reading in 200 words each. Cite KJV only.

Submit: Text via LMS assignment form. PDF upload optional for longer work.

Grading

Grading mode: Auto-grade eligible (written text).

Pass: 70%

Rubric (100 points)

Auto-grade hints

Keywords for automated pre-check: KJV, Christ, Scripture, God, Lesson, Verilog, Intro

Week 05

Week 05 Assignment — Practical Ministry Step

Course: SEMI-102 · Chip Design Fundamentals (Digital Logic & Fab Overview)

Week focus: SEMI-102 — Lesson 5: Simulation, Verification, and False Witness Avoidance

Learning objective (Bloom's taxonomy)

Students will **demonstrate** course content from **SEMI-102 — Lesson 5: Simulation, Verification, and False Witness Avoidance** with KJV integration and measurable evidence in the submission.

Task

Demonstrate: Complete one practical ministry action tied to **SEMI-102 — Lesson 5: Simulation, Verification, and False Witness Avoidance** (visit, prayer walk, family worship, or service). Submit a 200-word report plus optional photo upload.

Submit: Text via LMS assignment form. PDF upload optional for longer work.

Grading

Grading mode: Manual review (practical/upload).

Pass: 70%

Rubric (100 points)

Week 06

Week 06 Assignment — Witness Outline

Course: SEMI-102 · Chip Design Fundamentals (Digital Logic & Fab Overview)

Week focus: SEMI-102 — Lesson 6: FPGA Labs and Prototype Stewardship

Learning objective (Bloom's taxonomy)

Students will **construct** course content from **SEMI-102 — Lesson 6: FPGA Labs and Prototype Stewardship** with KJV integration and measurable evidence in the submission.

Task

Construct: Draft a 3-minute spoken witness outline using this week's theme. Include gospel bridge, one objection with biblical answer, and call to faith.

Submit: Text via LMS assignment form. PDF upload optional for longer work.

Grading

Grading mode: Auto-grade eligible (written text).

Pass: 70%

Rubric (100 points)

Auto-grade hints

Keywords for automated pre-check: KJV, Christ, Scripture, God, Lesson, Prototype, Stewardship

Week 07

Week 07 Assignment — Cross-Reference Study

Course: SEMI-102 · Chip Design Fundamentals (Digital Logic & Fab Overview)

Week focus: SEMI-102 — Lesson 7: Physical Design and Floorplanning Overview

Learning objective (Bloom's taxonomy)

Students will **compare** course content from **SEMI-102 — Lesson 7: Physical Design and Floorplanning Overview** with KJV integration and measurable evidence in the submission.

Task

Compare: Find three cross-references that illuminate **SEMI-102 — Lesson 7: Physical Design and Floorplanning Overview**. Write 400 words comparing themes (OT + NT).

Submit: Text via LMS assignment form. PDF upload optional for longer work.

Grading

Grading mode: Auto-grade eligible (written text).

Pass: 70%

Rubric (100 points)

Auto-grade hints

Keywords for automated pre-check: KJV, Christ, Scripture, God, Lesson, Physical, Design

Week 08

Week 08 Assignment — Historical Context Brief

Course: SEMI-102 · Chip Design Fundamentals (Digital Logic & Fab Overview)

Week focus: SEMI-102 — Lesson 8: Design-for-Test and Quality Culture

Learning objective (Bloom's taxonomy)

Students will **describe** course content from **SEMI-102 — Lesson 8: Design-for-Test and Quality Culture** with KJV integration and measurable evidence in the submission.

Task

Describe: Write 350 words on historical/literary context for **SEMI-102 — Lesson 8: Design-for-Test and Quality Culture**. Minimum four KJV citations.

Submit: Text via LMS assignment form. PDF upload optional for longer work.

Grading

Grading mode: Auto-grade eligible (written text).

Pass: 70%

Rubric (100 points)

Auto-grade hints

Keywords for automated pre-check: KJV, Christ, Scripture, God, Lesson, Design, Quality

Week 09

Week 09 Assignment — Christological Connection Essay

Course: SEMI-102 · Chip Design Fundamentals (Digital Logic & Fab Overview)

Week focus: SEMI-102 — Lesson 9: IP, Patents, and Honest Attribution

Learning objective (Bloom's taxonomy)

Students will **evaluate** course content from **SEMI-102 — Lesson 9: IP, Patents, and Honest Attribution** with KJV integration and measurable evidence in the submission.

Task

Evaluate: Explain how **SEMI-102 — Lesson 9: IP, Patents, and Honest Attribution** points to Christ in 400–600 words. Use literal-grammatical-historical method.

Submit: Text via LMS assignment form. PDF upload optional for longer work.

Grading

Grading mode: Auto-grade eligible (written text).

Pass: 70%

Rubric (100 points)

Auto-grade hints

Keywords for automated pre-check: KJV, Christ, Scripture, God, Lesson, Patents, Honest

Week 10

Week 10 Assignment — Teaching Prep

Course: SEMI-102 · Chip Design Fundamentals (Digital Logic & Fab Overview)

Week focus: SEMI-102 — Lesson 10: Fab Handoff: DFM Rules and Communication

Learning objective (Bloom's taxonomy)

Students will **design** course content from **SEMI-102 — Lesson 10: Fab Handoff: DFM Rules and Communication** with KJV integration and measurable evidence in the submission.

Task

Design: Prepare a 5-minute teaching outline for **SEMI-102 — Lesson 10: Fab Handoff: DFM Rules and Communication** suitable for a small group or homeschool lesson.

Submit: Text via LMS assignment form. PDF upload optional for longer work.

Grading

Grading mode: Auto-grade eligible (written text).

Pass: 70%

Rubric (100 points)

Auto-grade hints

Keywords for automated pre-check: KJV, Christ, Scripture, God, Lesson, Handoff, Rules

Week 11

Week 11 Assignment — Integration & Review

Course: SEMI-102 · Chip Design Fundamentals (Digital Logic & Fab Overview)

Week focus: SEMI-102 — Lesson 12: Capstone: Simple Logic Design Portfolio

Learning objective (Bloom's taxonomy)

Students will **synthesize** course content from **SEMI-102 — Lesson 12: Capstone: Simple Logic Design Portfolio** with KJV integration and measurable evidence in the submission.

Task

Synthesize: Synthesize the top five themes from Chip Design Fundamentals (Digital Logic & Fab Overview). 600 words, minimum six KJV citations, one paragraph on personal growth.

Submit: Text via LMS assignment form. PDF upload optional for longer work.

Grading

Grading mode: Auto-grade eligible (written text).

Pass: 70%

Rubric (100 points)

Auto-grade hints

Keywords for automated pre-check: KJV, Christ, Scripture, God, Lesson, Capstone, Simple

Week 12

Learning objective (Bloom's taxonomy)

Students will **create** an original ministry artifact synthesizing Chip Design Fundamentals (Digital Logic & Fab Overview) with KJV fidelity and scholarship-gallery quality.

Creative Ministry Project — SEMI-102

Course: Chip Design Fundamentals (Digital Logic & Fab Overview)

Integrate strategic workforce skills with gospel witness. Submit a capstone artifact eligible for the Scholarship Gallery.

Grading

Grading mode: Manual review (creative upload).

Pass: 70%

Rubric (100 points)

Creative Ministry Project

Creative Ministry Project — SEMI-102

Course: Chip Design Fundamentals (Digital Logic & Fab Overview)

Integrate strategic workforce skills with gospel witness. Submit a capstone artifact eligible for the Scholarship Gallery.