

In the Mod Design 1: Dimensions expansion course, students build on their previous Mod Design 1 project (prerequisite) by coding their own Minecraft® dimension. Students expand their Java™ knowledge and learn advanced coding skills and concepts to create custom portals and dimensions, auto-generating structures, and advanced AI. At the end of the course, they will have their own polished mod that they created from scratch.

This expansion pack includes a project-based experience in which students take on the role of creator. In addition to technical skills, students develop the creative, critical thinking, and problem-solving skills necessary to build amazing projects from start to finish. Throughout the expansion pack, students work with industry-standard tools used by professionals. If they need any help along the way with their coursework or projects, students can reach out to experts for support by email, chat, or phone.

By the end of this course, students will have built an original, professional-grade project and developed the knowledge, skills, and confidence to become creators on their own, either in further study or professionally.

Course Materials

All required materials are included with this course.

Length: One semester

UNIT 1: WELCOME TO MOD DESIGN 1: DIMENSIONS

LESSON 1: IMPORT ALL PORTALS

Study: Import all Portals

Create classes for portal block and frame block.

Duration: 1 hr Scoring: 0 points

Review: Import all Portals Review

Review key concepts and skills from the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

LESSON 2: DEBUG MODE-IFICATIONS

Study: Debug Mode-ifications

Edit your portal frame block.

Duration: 1 hr Scoring: 0 points

Review: Debug Mode-ifications Review

Review key concepts and skills from the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

LESSON 3: ALL SHAPES AND SIZES

Study: All Shapes and Sizes

Edit the name and texture of the portal placer.

Duration: 1 hr Scoring: 0 points

Review: All Shapes and Sizes Review

Review key concepts and skills from the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

LESSON 4: WRAP UP

Practice: Troubleshooting

Fix a broken file.

Duration: 1 hr Scoring: 15 points

Quiz: Quiz

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

Explore: Bonus Content

Explore extra content from the unit.

Duration: 0 hrs 30 mins Scoring: 0 points

UNIT 2: THE FOURTH DIMENSION

LESSON 1: FROM THE GROUND UP

Study: From the Ground Up

Add all the classes necessary to get your dimension up and running with a custom portal.

Duration: 1 hr Scoring: 0 points

Review: From the Ground Up Review

Review key concepts and skills from the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

LESSON 2: EYES ON THE SKIES

Study: Eyes on the Skies

Customize your dimension.

Duration: 1 hr Scoring: 0 points

Review: Eyes on the Skies Review

Review key concepts and skills from the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

LESSON 3: WRAP UP

Practice: Troubleshooting

Fix a broken file.

Duration: 1 hr Scoring: 15 points

Quiz: Quiz

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

Explore: Bonus Content

Explore extra content from the unit.

Duration: 0 hrs 30 mins Scoring: 0 points

Project: Checkpoint

Present your course project for review.

Duration: 0 hrs 15 mins Scoring: 30 points

UNIT 3: STRUCTURE CONSTRUCTION

LESSON 1: CONSTRUCT YOUR STRUCTURE

Study: Construct Your Structure

Add main classes for the structure.

Duration: 1 hr Scoring: 0 points

Review: Construct Your Structure Review

Review key concepts and skills from the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

LESSON 2: ADVANCED ARCHITECTURE

Study: Advanced Architecture

Create a structure using a new building recipe.

Duration: 1 hr Scoring: 0 points

Review: Advanced Architecture Review

Review key concepts and skills from the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

LESSON 3: IF, ELSE IF, ELSE

Study: If, Else If, Else

Learn how to allow your structure placer to spawn multiple buildings.

Duration: 1 hr Scoring: 0 points

Review: If, Else If, Else Review

Review key concepts and skills from the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

LESSON 4: WRAP UP

Practice: Troubleshooting

Fix a broken file.

Duration: 1 hr Scoring: 15 points

Quiz: Quiz

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

Explore: Bonus Content

Explore extra content from the unit.

Duration: 0 hrs 30 mins Scoring: 0 points

UNIT 4: MY PET DRAGON

LESSON 1: TARGET PRACTICE

Study: Target Practice

Create your basic dragon.

Duration: 1 hr Scoring: 0 points

Review: Target Practice Review

Review key concepts and skills from the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

LESSON 2: DRAGON RODEO

Study: Dragon Rodeo

Create a new dragon lasso item and then use it to mount the dragon.

Duration: 1 hr Scoring: 0 points

Review: Dragon Rodeo Review

Review key concepts and skills from the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

LESSON 3: LOOK! VECTORS!

Study: Look! Vectors!

Learn how to make the dragon follow your gaze and shoot a fireball when you press spacebar.

Duration: 1 hr Scoring: 0 points

Review: Look! Vectors! Review

Review key concepts and skills from the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

LESSON 4: UPLOAD FOR REVIEW

Project: Upload for Review

Upload your project for review.

Duration: 1 hr Scoring: 100 points

LESSON 5: WRAP UP**Practice: Troubleshooting**

Fix a broken file.

Duration: 1 hr Scoring: 15 points

Quiz: Quiz

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

Explore: Bonus Content

Explore extra content from the unit.

Duration: 0 hrs 30 mins Scoring: 0 points

UNIT 5: ADVANCED TOPICS**LESSON 1: MOD MERGER****Study: Mod Merger**

Combine mods.

Duration: 1 hr Scoring: 0 points

LESSON 2: DIMENSION DUPLICATOR**Study: Dimension Duplicator**

Create a second dimension.

Duration: 1 hr Scoring: 0 points