**Detailed Content Outline**

**Content Link: https://blog.biobide.com/the-drug-discovery-process**

**Prompt Used:**

Assume the role of an instructional designer. Use the attached [blank DCO template]. Read the provided source content. Fill out the DCO exactly in the format of the template, extracting key topics, subtopics, objectives, and supportive details. Ensure clarity and logical structure suitable for [healthcare professionals]. Do not change the template heading. If you find any gaps while creating a DCO, add a query/concern under the notes column of the provided blank template. Ensure the topics covered in DCO will stretch up to 5-7 minutes as a developed e-learning module using Storyline. For the proposed treatment column of the DCO, follow the following guidelines.

The "Proposed Treatment" should recommend the optimal instructional method, media type, or interactivity for each content element. Your recommendations should inform storyboarding and development teams about the intended learning experience for each section. Your goal is to clearly identify the instructional method or media type (e.g., Image and text, video, animation, interactive quiz, click-to-reveal, scenario, case study, drag-and-drop, tabbed interaction, accordion interactivity, slideshow/carousel, flip cards, hotspot interactivity, interactive infographic).

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| **Screen no.** | **Page no. and title** | **Content to be covered** | **Proposed treatment** | **Approx. duration (Sec)** |
| 1 | Welcome Screen | Launch page:  • Course title: *The Drug Discovery Process: What Is It and Its Major Steps*  • Course duration: 5–7 min  • Course logo  • Relevant image (drug discovery/healthcare context)  • Start button to proceed | Display content on a static, non-interactive screen; include relevant text and visuals. | 10 |
| 2 | Course Navigation | Tutorial on how to navigate through the course (Next, Back, Menu, Resources). Highlight buttons with on-screen text + narration. | Present information via a video; include visual and audio instructions or narration as needed. | 20 |
| 3 | Course Overview | Introduce the scope of the course:  • What drug discovery is  • Why it matters in healthcare  • High-level outline of the stages covered in this module (Early Discovery, Pre-Clinical, Clinical, Regulatory, Zebrafish). | Display content on a static, non-interactive screen; include relevant text and visuals. | 40 |
| 4 | Course Objectives | By the end of this module, learners will be able to:  • Define the drug discovery process • Identify the four major stages  • Recognize ethical and cost considerations (animal testing, zebrafish)  • Describe the importance of regulatory approval in healthcare. | Display content on a static, non-interactive screen; include relevant text and visuals. | 30 |
| 5 | What is Drug Discovery? | Explain the concept:  • Drug discovery takes 10–13 years • Only ~1 in 5,000–10,000 compounds reach market  • Cost: ~$2.6–3 billion per drug.  • Importance of reducing animal testing. | Add a click-to-reveal interaction where users click elements to uncover more information. | 50 |
| 6 | The Four Major Stages | Introduce the four stages:  • Early Drug Discovery  • Pre-Clinical Phase  • Clinical Phases  • Regulatory Approval. | Include a tabbed interface where each tab reveals related content, examples, or steps. | 50 |
| 7 | Early Drug Discovery (Detailed) | Cover sub-steps:  • Target identification & validation • High Throughput/Content Screening  • Hit Identification  • Assay Development  • Hit-to-Lead (H2L)  • Lead Optimization  • In vivo & In vitro assays. | Use an accordion interaction to expand or collapse sections of content for easy navigation. | 60 |
| 8 | Pre-Clinical Phase | Explain:  • Refining compounds  • Testing in lab/animal/alternative models  • Safety & dose calculation  • Scaled-up production for Clinical Phases. | Create flip cards that learners can turn over to see additional facts or explanations. | 40 |
| 9 | Clinical Phases | Explain Phases I–III:  • Phase I – safety, tolerance (20–80 people)  • Phase II – efficacy, dosage (100–500 patients)  • Phase III – effectiveness, rare side effects, controlled studies.  • Phase IV – post-market surveillance. | Develop an interactive infographic where clicking or hovering reveals extra data or visuals. | 60 |
| 10 | Regulatory Approval | Cover:  • Approval requirements (safety, efficacy, quality)  • FDA/CDER review process  • Summary of Product Characteristics  • Risk-benefit ratio and ongoing monitoring. | Create a scenario where learners make decisions and experience different outcomes based on choices (e.g., What if data is incomplete?). | 50 |
| 11 | Zebrafish in Drug Discovery | Explain:  • Benefits of Zebrafish (fast reproduction, transparency, gene similarity to humans)  • Role in 3Rs (Replacement, Reduction, Refinement). | Implement a hotspot interaction allowing users to click on areas of a zebrafish diagram for more details. | 50 |
| 12 | Knowledge Check | Sample questions (2–3):  • Which phase involves dose calculation?  • What is the main purpose of Phase I?  • What is one benefit of Zebrafish in research? | Present an interactive quiz question; provide multiple-choice options and immediate feedback. | 60 |
| 13 | Summary | Recap:  • Drug discovery is lengthy, costly, and complex  • Four stages (Early, Pre-Clinical, Clinical, Regulatory)  • Zebrafish improves ethics and cost-effectiveness. | Display content on a static, non-interactive screen; include relevant text and visuals. | 30 |
| 14 | Course Completion | Final screen confirming course completion. Show certificate icon or “You’ve completed the module” message. | Display content on a static, non-interactive screen; include relevant text and visuals. | 20 |