
Engineering Physics 4D3/6D3

Nuclear Reactor Systems Analysis (Reactor Physics)

Prepared by:

Wm. J. Garland, Professor, Department of Engineering Physics,
McMaster University, Hamilton, Ontario, Canada

Summary

Introduction to nuclear energy; nuclear physics and chain reactions; reactor statics and kinetics; multigroup analysis; core thermalhydraulics; reactor design.

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1 Introduction

1.1 Overview

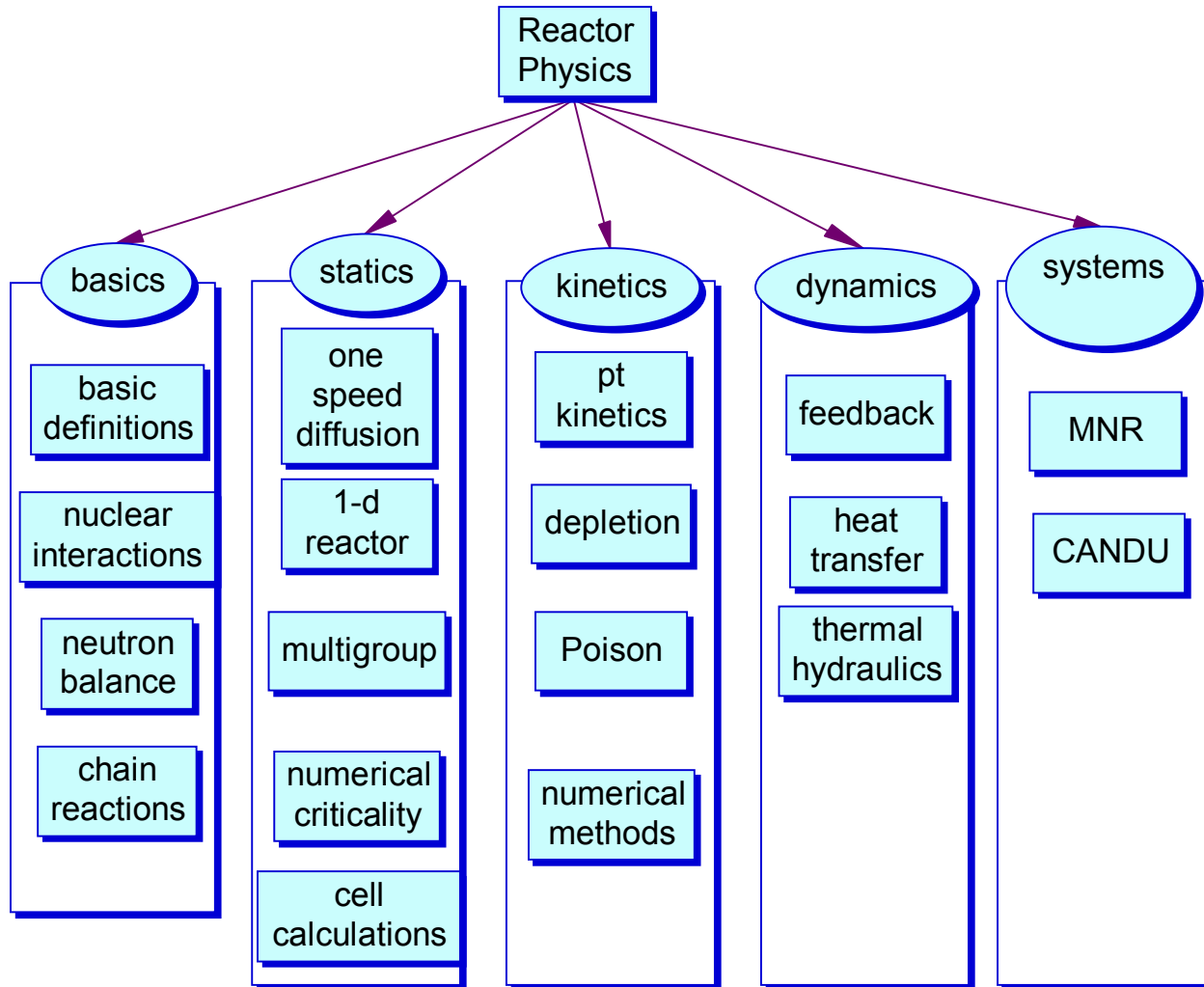


Figure 1.1 Course Overview

1.2 Learning outcomes

- To understand the physical processes
- To understand and be able to write down the basic equations
- To be able to solve the basic equations
- To be able to simulate a reactor / source configuration as appropriate
 - # of dimensions
 - SS or transient
 - # of groups
 - delayed precursors
 - space dependent properties and grid spacing

1.3 Administration

1.3.1 Sign in and introduction

- To be discussed in class.

1.3.2 Schedule and course outline handouts / location on the web

- McMaster's Nuclear Engineering web page: <http://epic.mcmaster.ca/~garlandw/>, or use the url alias that works for most recent browsers: <http://nuceng.mcmaster.ca>. Look around to learn more about nuclear engineering in general. This course is listed on this website.
- Or go directly to the web page for this course at <http://epic.mcmaster.ca/~garlandw/ep4d3/ep4d3index.htm>.
- On the course web page you will find:
 - course outline
 - schedule
 - contact information
 - announcements
 - course notes
 - problem sets and solutions
 - links to related sites

1.3.3 Office hours and TA contact

- To be discussed in class.

1.3.4 Effective learning

- Follow the “Teaching matters” link to Learning 101 - A Student Guide to Effective Learning. This is a slide show on-line. Full text can be viewed or downloaded as well.

1.3.5 Reading Assignment

- Important: Read ahead before class.

1.3.6 Announcements

- To be discussed in class.

About this document

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Author and affiliation:

Dr. Wm. J. Garland, Professor, Department of Engineering Physics, McMaster University, Hamilton, Ontario, Canada

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