



**1. Proposal Summary**

This will be an experimental offering of a course under consideration for inclusion in the new Pharm.D. curriculum. The course covers identification of carcinogens and mechanisms for carcinogenesis for chemicals, radioactive materials and infections.

**2. Summary of All Course Action Required\***

**a. Newly Created Courses to FSU:**

<b>Prefix</b>	<b>Number</b>	<b>Title</b>
<b>PHAR</b>	<b>490</b>	<b>Carcinogenesis</b>

**b. Courses to be Deleted From FSU Catalog:**

<b>Prefix</b>	<b>Number</b>	<b>Title</b>
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**c. Existing Course(s) to be Modified:**

<b>Prefix</b>	<b>Number</b>	<b>Title</b>
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**d. Addition of existing FSU courses to program**

<b>Prefix</b>	<b>Number</b>	<b>Title</b>
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**e. Removal of existing FSU courses from program**

<b>Prefix</b>	<b>Number</b>	<b>Title</b>
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**3. Summary of All Consultations**

**Form Sent (B or C)**

**Date Sent**

**Responding Dept.**

**Date Received & by Whom**

**4. Will External Accreditation be Sought? (For new programs or certificates only)**

\_\_\_\_\_ **Yes**

\_\_\_\_\_ **No**

**If yes, name the organization involved with accreditation for this program.**

**5. Program Checksheets affected by this proposal.**

**CREATE NEW COURSE**  
Course Data Entry Form

**FORM F**

Create New Course  
Rev. 07/23/07

**I. ACTION TO BE TAKEN: CREATE A NEW COURSE**

Notes

1. Complete each item in Section I and Section II.
2. If this course is to be used as a prerequisite for other university courses, Form Fs that reflect the prerequisite change must be submitted for those courses as well.

Term Effective (6 digit code only): 201008 Examples: 200801(Spring), 200805(Summer), 200808(Fall)

Note: The first four digits indicate year, the next two digits indicate month in which term begins.

**II. PROPOSED FOR NEW COURSE: Complete all sections a through r.** See manual for clarification.

a. Course Prefix

PHAR

b. Number

490

c. Enter Contact Hours per week in boxes.

LECTure 2

LAB

INDEPENDent Study – Check (x)

Practicum:

Seminar:

d. Course Title: Carcinogenesis (Limit to 30 characters/spaces.)

e. College Code: PH

f. Department Code: PHAR

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type:  Variable  Fixed h. Minimum Credit Hours 2 i. Maximum Credit Hours 2

j. May Be Repeated for Added Credit: Check (x)  Yes  No

k. Levels: Check (x)  Undergraduate  Graduate  Professional

l. Grade Method: Check (x)  Normal Grading  Credit/No Credit only (Pass/Fail)

m. Does proposed new course replace an equivalent course? Check (x)  Yes  No

n. Equivalent course: Prefix \_\_\_\_\_ Number \_\_\_\_\_ See instructions on Replacement courses.

**o. CATALOG DESCRIPTION** – Limit to 75 words – PLEASE BE CONCISE.

The course will acquaint the student with the identification of carcinogens and mechanisms for carcinogenesis of selected agents such as chemicals, radiation and infections. . The role of environmental factors (lifestyle, diet, social and behavioral practices) in influencing susceptibility to cancer and the genetic differences (germline and somatic mutations, epigenetics, DNA repair) that have been causally implicated in cancer will be discussed.

p. Term(s) Offered: Fall/Spring (See instructions for listing.) q. Max. Section Enrollment: 30

r. Prerequisites/Co-requisites/Restrictions: (If none, leave blank.) Limited to 100 spaces. Prerequisite:

UCC Chair Signature/Date: \_\_\_\_\_

Academic Affairs Approval Signature/Date: \_\_\_\_\_

\_\_\_\_\_ / \_\_\_\_ / \_\_\_\_

 \_\_\_\_\_ 4/18/10

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS)  General Education (GE)  Occupational Education (OC)  G.E. Codes

**Office of the Registrar use ONLY**

Date Rec'd: \_\_\_\_\_ Date Completed: \_\_\_\_\_ Entered: SCACRSE \_\_ SCADETL \_\_ SCARRES \_\_ SCAPREQ \_\_

## NEW COURSE INFORMATION FORM

**Course Identification:**

<b>Prefix:</b>	<b>Number</b>	<b>Title</b>
PHAR	490	Carcinogenesis

**Course Description:**

The course will acquaint the student with the identification of carcinogens and mechanisms for carcinogenesis of selected agents such as chemicals, radiation and infections. . The role of environmental factors (lifestyle, diet, social and behavioral practices) in influencing susceptibility to cancer and the genetic differences (germline and somatic mutations, epigenetics, DNA repair) that have been causally implicated in cancer will be discussed.

**Prerequisite:** P-2 status

**Course Outcomes and Assessment Plan:**

By the end of the course, the student should be able to:

1. Identify trends in cancer statistics
2. Discuss the types of genetic changes that are implicated in causing cancer and results of cancer genomic studies
3. Compare and contrast IARC and NTP classification of carcinogens
4. Compare and contrast classes of chemical carcinogens (initiators, promoters)
5. Describe the metabolism of selected classes of carcinogens and identify metabolite(s) responsible for carcinogenic effects
6. Identify mechanisms for DNA changes due to chemicals, radiation or biological agents
7. Compare and contrast methods used to identify carcinogens (advantages and disadvantages of each method)
8. Describe environmental factors that influence susceptibility to cancer

**Assessment:** Students will be assessed using examinations, presentations, and class participation

**Course Outline including Time Allocation:**

Topic	Time Allocation
Introduction	1
Cancer statistics	2
Genetic changes- germline and somatic mutations	2
Genetic influence on metabolism, DNA repair	1
Presentations on specific mutations/cancer caused	3
Selected carcinogens, metabolism, DNA effects	4
Methods for identification of carcinogens- short term tests, animal testing, epidemiology	3
Risk assessment (exposure to hazard)	1
Environmental factors- lifestyle, diet, social and behavioral practices (tobacco, alcohol)	4
Chemoprevention (SERMs, 5 $\alpha$ -reductase inhibitors)	1
Exams	2
Student group presentations	6

Note: Content varies with each semester