

THE UNIVERSITY OF BRITISH COLUMBIA | OKANAGAN



OKANAGAN SENATE SECRETARIAT

Enrolment Services

Senate and Curriculum Services

3333 University Way

Kelowna, BC · V1V 1V7

Tel: (250) 807-9619 · Fax: (250) 807-8007

michelle.kruiswyk@ubc.ca

10 December 2008

To: Okanagan Senate

From: Senate Curriculum Committee

Subject: November Curriculum Proposals (approval)

The Senate Curriculum Committee has reviewed the material forwarded to it by the Faculty, and encloses those proposals it deems ready for approval.

As such, the following is recommended to Senate:

Motion: That Senate approve the new and revised courses brought forward by the Faculty of Applied Science as set out in the attached proposals.

Respectfully submitted,
Mr. Christopher Eaton
Acting Chair, Curriculum Committee



OKANAGAN SENATE SECRETARIAT

Enrolment Services

Senate and Curriculum Services

3333 University Way

Kelowna, BC · V1V 1V7

Tel: (250) 807-9619 · Fax: (250) 807-8007

michelle.kruiswyk@ubc.ca

10 December 2008

To: Okanagan Senate
From: Senate Curriculum Committee
Subject: November Curriculum Proposals

Attached please find the following for your consideration:

Faculty of Applied Science

1. The following revised courses:
 - a. ENGR 380 (3) Design of Machine Elements
 - b. ENGR 381 (3) Kinematics and Dynamics of Machinery
2. The following new courses:
 - c. APSC 574 (3) Mechanics of Laminated and Textile Composites
 - d. APSC 575 (3) Engineering Microbiology



UBC Okanagan Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Applied Science Department: School of Engineering Faculty Approval Date: Nov. 5, 2008 Effective Session: 2008W</p>	<p>Date: October 27, 2008 Contact Person: Spiro Yannacopoulos Phone: 250-807-8714 Email: spiro.yannacopoulos@ubc.ca</p>
<p>Proposed Calendar Entry: ENGR 380 (3) Design of Machine Elements Product design methodology; static and fatigue failure theory; design/selection of components including shafts, springs, bearings, gears, brakes, and clutches; design of bolted joints, power screws, and welds; design evaluation and optimization; interaction of materials, processing, and design. Major design project. [3-0-1] Prerequisite: APSC 260.</p>	<p>URL: N/A</p> <p>Present Calendar Entry: ENGR 380 (3) Mechanical Engineering Design-I Product design methodology; fatigue; design/selection of components including springs, bearings, gears, brakes, clutches; Design evaluation and optimization; interaction of materials, processing and design; motion generated by cams and four-bar linkages; design for system dynamics. Major design project. {2-0-3}</p> <p>Type of Action: Change course title, revise course vector, add prerequisite, and change calendar description.</p> <p>Rationale: The courses ENGR 380 and ENGR 381 had material overlapping with each other. This has been addressed by removing the overlaps. In addition, by curriculum design, ENGR 380 and ENGR 381 should be taken by students in any order and should not require prerequisite to each other. Thus, the content of the two courses was reorganized in order to remove the third-year prerequisite stated in the current calendar description.</p> <p>The independence of order has also been reflected in the change of title which now does not indicate a particular sequence. Finally the prerequisites have been modified to ensure sufficient background for the course.</p> <p>The course vector is revised in order to give instructor sufficient lecture hours to cover the main topics.</p>



UBC Okanagan Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Applied Science Department: School of Engineering Faculty Approval Date: Nov. 5, 2008 Effective Session: 2009S</p>	<p>Date: October 27, 2008 Contact Person: Spiro Yannacopoulos Phone: 250-807-8714 Email: spiro.yannacopoulos@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p>ENGR 381 (3) Kinematics and Dynamics of Machinery The design, analysis, and synthesis of mechanisms, linkages, cams, gear trains, and belt drives; dynamic force analysis; balancing of rotating and reciprocating masses; design for system dynamics. [3-0-1] <i>Prerequisite: All of APSC 180, APSC 181.</i></p>	<p>URL: N/A</p> <p>Present Calendar Entry:</p> <p>ENGR 381 (3) Mechanical Engineering Design II The design, analysis of mechanisms, linkages, cams. Design and selection of gears, gear trains, belt drives, brakes-clutches. Instrumentation and computer control of selected systems. [2-0-3] <i>Prerequisite: ENGR 380.</i></p> <p>Type of Action: Change course title, revise course vector, add prerequisite, and change calendar description.</p> <p>Rationale: The courses ENGR 380 and ENGR 381 had material overlapping with each other. This has been addressed by removing the overlaps. In addition, by curriculum design, ENGR 380 and ENGR 381 should be taken by students in any order and should not require prerequisite to each other. Thus, the content of the two courses was reorganized in order to remove the third-year prerequisite stated in the current calendar description.</p> <p>The independence of order has also been reflected in the change of title which now does not indicate a particular sequence. Finally the prerequisites have been modified to ensure sufficient background for the course.</p> <p>The course vector is revised in order to give instructor sufficient lecture hours to cover the main topics.</p>



UBC Okanagan Curriculum Proposal Form Change to Course or Program

Category: 1

Faculty: Applied Science Department: School of Engineering Faculty Approval Date: Nov. 5, 2008 Effective Session: 2008W	Date: October 27, 2008 Contact Person: Spiro Yannacopoulos Phone: 250-807- 8714 Email: spiro.yannacopoulos@ubc.ca
Proposed Calendar Entry: APSC 574 (3) Mechanics of Laminated and Textile Composites Classification of composite materials; laminates under individual and combined mechanical and hygrothermal loads; stiffness and strength design; non-linear material models of textile composites; homogenization and characterization; failure criteria; warpage; impact response; introduction to multi-level modeling of nano-tube reinforced composites.	URL: N/A Present Calendar Entry: Type of Action: New Course Rationale: This new course is added to support the M.Eng., M.A.Sc., and Ph.D. program in the School of Engineering, Faculty of Applied Science.



UBC Okanagan Curriculum Proposal Form Change to Course or Program

Category: 1

Faculty: Applied Science Department: School of Engineering Faculty Approval Date: Nov. 5, 2008 Effective Session: 2008W	Date: October 27, 2008 Contact Person: Spiro Yannacopoulos Phone: 250-807- 8714 Email: spiro.yannacopoulos@ubc.ca
Proposed Calendar Entry: APSC 575 (3) Engineering Microbiology Aspects of microbiology and biochemistry as related to engineering applications. Topics include detection of organisms, energetics and kinetics of microbial growth, and the biological fate of pollutants. The course is designed for graduate students with little or no biology background.	URL: N/A Present Calendar Entry: Type of Action: New Course Rationale: This new course is added to support the M.Eng., M.A.Sc., and Ph.D. program in the School of Engineering, Faculty of Applied Science.