

S.87-68

SIMON FRASER UNIVERSITY

MEMORANDUM

TO: Senate

FROM: J.W.G. Ivany,
Chair, SCAP

SUBJECT: Graduate Curriculum
Changes - Engineering Science
Reference: SCAP 87-36

DATE: Nov.19, 1987

Action undertaken by the Senate Committee on Academic Planning/Senate Graduate Studies Committee gives rise to the following motion:

MOTION: "That Senate approve and recommend approval to the Board of Governors, as set forth in S.87-68

- 1) deletion of ENSC 831
- 2) change of title, description and pre-requisite for ENSC 832
- 3) change of title and description for ENSC 861"

SCHOOL OF ENGINEERING SCIENCE
SIMON FRASER UNIVERSITY

M E M O

To: Marg Savage, Chair
Applied Sciences Graduate Studies Committee

From: Jim Cavers, Chair
Engineering Science Graduate Program

Date: October 7, 1987

Subject: Calendar Revisions

The following are the Engineering Science graduate studies calendar revisions:

1. Course Deletions

ENSC 831-3 RF Communications.

Rationale: this is a specialized course which does not reflect one of our active research areas. If we have the opportunity with a visiting professor, we would offer it under Special Topics.

2. Calendar Description Modifications

ENSC 832-3 Mobile and Satellite Communications

Propagation phenomena, modulation techniques and system design considerations for mobile and satellite networks. Topics include: fading and shadowing, noise and interference effects, analog and digital transmission, cellular designs, multiple access techniques.

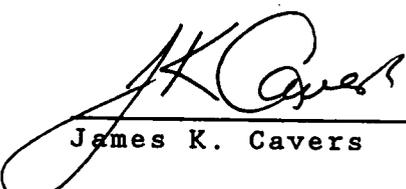
Prerequisite: ENSC 800

Rationale: This focus better reflects the research activity of the faculty and the interests of the Lower Mainland communications industry.

ENSC 861-3 Source Coding for Speech and Images

Source characterization and rate-distortion functions. Sampling and quantization: uniform, optimal, adaptive. Entropy coding, variable length codes. Predictive encoding, optimal linear predictors, noise feedback coding. Tree and trellis coding, search techniques. Transform coding, optimal and suboptimal transforms, subband coding, bit allocation algorithms. Vector quantization. Analysis-synthesis techniques. Speech coding at 2.4 to 16 kbps. Image coding at 0.25 to 1 bit/pixel. Prerequisite: ENSC 800

Rationale: The incorporation of speech, and the focus on coding and compression, better reflects the research activity of the faculty and the interests of the local high tech community, from which we draw many of our students.



James K. Cavers

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