

MECHENGRNOTE 5500
August 16, 2012

MECHENGRDEPT NOTICE 5500

From: Chair, Mechanical Engineering Department

Subj: MECHANICAL ENGINEERING DEPARTMENT CALCULATOR POLICY
BEGINNING WITH THE CLASS OF 2015

1. PURPOSE.

a. The purpose of this notice is to provide guidance to course directors, faculty and midshipmen of the types of calculators that are allowed for use on in-class assessment instruments such as quizzes, semester examinations, and final course exams for all courses taught by the department. The new policy begins with the Class of 2015.

2. BACKGROUND.

b. Today's calculators are full of applications, functions and tools that make them beneficial for use in all engineering applications. The use of these midshipmen-issued calculators in courses offered by the Mechanical Engineering Department has been observed to inhibit critical thinking and the learning process. Observations by faculty in the department are that many midshipmen have been less apt to rely upon skills presented in developmental mathematics courses to formulate and solve engineering problems, and prefer to use the computational power of their calculators to perform even the simplest of tasks when solving engineering problems. The consequence is that many midshipmen fail to close the loop in the learning process by critiquing results, fail to transport knowledge from mathematics into engineering, and fail to further develop their mathematics skills in an engineering context.

The new calculator policy is not meant to be punitive or restrictive.

3. Responsibilities

a. Department Chair: The Department Chair is responsible for ensuring the integrity of all department policies which affect the operation of the General and Mechanical Engineering programs. The chair will ensure that all course directors are aware of the policy

b. Course Directors: Course Directors are responsible for ensuring that all instructors involved in their courses are aware of the policy, that course policy statements explicitly provide guidance of calculator use, and that the acceptable calculators are reviewed and updated annually.

4. Acceptable Calculators

Acceptable calculators under this policy are those that are approved by the National Council of Examiners for Engineering and Survey, NCEES, for use on the Fundamentals of Engineering exam. NCEES updates annually this list of approved devices.

Casio: All fx-115 models. Any Casio calculator must contain fx-115 in its model name. Examples of acceptable Casio fx-115 models include (but are not limited to)

- fx-115 MS
- fx-115 MS Plus
- fx-115 MS SR
- fx-115 ES

Hewlett Packard: The HP 33s and HP 35s models, but no others.

Texas Instruments: All TI-30X and TI-36X models. Any Texas Instruments calculator must contain either TI-30X or TI-36X in its model name. Examples of acceptable TI-30X and TI-36X models include (but are not limited to)

- TI-30Xa
- TI-30Xa SOLAR
- TI-30Xa SE
- TI-30XS Multiview
- TI-30X IIB
- TI-30X IIS
- TI-36X II
- TI-36X SOLAR
- TI-36X Pro

This list can be viewed http://ncees.org/Exams/Exam-day_policies/Calculator_policy.php.