Fall 1994

Proposal Presentation Agenda

Title	Department	Name	Time
Engineering Counselling Library	1st. Yr. Engineering	Dr. Marna Zinatelli	7:05
Computer Upgrades to ChE 4th Yr. Study Room	Chemical Engineering	David Bridgeman	7:10
Portable Multi-Purpose Building Science Test Facility	Civil Engineering	Dr. E.F.P. Burnett	7:15
Multimedia upgrading of CIV E 353 (Geotechnical Engineering 2)	Civil Engineering	K. Klein J.C. Santamarina	7:20
- Handheld Dissolved Oxygen Meters- Pipettors- YSI 5905 BOD Probe	Civil Engineering	Bruce Stickney	7:25
- Upgrade to E & CE Public Access Watstar room - Expansion of Sunee Facility	Electrical & Computer	Roger Sanderson	7:30
BREAK	BREAK	BREAK	7:40
Curve Tracer for Electronics Lab	Electrical & Computer	Paul Hayes	7:55
SAE Video Set on "Basic Noise Control"	Mechanical Engineering	F. Ismail	8:00
Midnight Sun Solar Car Project		Dr. G. Savage Dave Walsh	8:05
Replacement Flow meters for Ch.E. Distillation Column	Chemical Engineering	W.A. Anderson	8:10
Waterluge Concrete Toboggan Team "A" Society		Stefano Normani Caroline Brabrook	8:15
- Watstar Rm Upgrade - Laboratory Stations - Robotics Computer Controllers - Cam Corder	Mechanical Engineering	M. Kaptein	8:20
DADS Engineering Software	Systems Design Engineering	John J. McPhee	8:25
Laboratory Upgrades; Oscilloscopes	Systems Design Engineering	Guenther Metzger	8:30

Submitter Information

Name: Dr. Marna Zinatelli
Phone Number: x2849
E-mail Address:
Position (ie. student, professor): Engineering Counselling Psychologist
Proposal Information
Title: Engineering Counselling Library
Date: October 6, 1994
Type (AE&R or non-AE&R): non-AE&R
Description (use the back of this page or additional paper if more space is required): Reading is often an important aspect of personal counselling. Unfortunately, certain key books are often unavailable or too expensive for students to purchase. A small collection of books stored in
engineering counselling and borrowed by clients greatly facilitates
the progress of engineering students in need of personal counselling.
This library was made possible by funding from WEEF and I am requesting
further assistance in order to purchase additional books.
Estimated Cost of Proposal (please itemize where possible):
Please see attached.

Would partial funding to the cost estimate provided above be acceptable? (Y or \mathbb{N}) \underline{Y}



Book List

<u>Title</u>	<u>Price</u>
The Perfectionist Predicament	\$ 8.00
Are You the One for Me	7.00
The Three Boxes of Life	20.00
10 Days to Self-esteem	20.00
Revolution from Within	25.00
Allies in Healing	20.00
Essays and Reports	5.00
Positive Solitude	14.00
Anger-The Misunderstood Emotion	15.00
Children of Alcoholics	17.00
Diagnostic & Statistical Manual of Mental Disorders IV	30.00
Test Anxiety	10.00
Getting the Love You Want	20.00
Workbooks on Anorexia Nervosa	30.00
I Can't Stop Crying: When Someone You Love Dies	10.00
The Dance of Anger	10.00
Family Ties That Bind	10.00
Intimate Connections	7.00
Transforming Body Image	16.00
A Major Clinical Handbook and Treatment Manual	
for Assessing and Treating Clients with Post	
Traumatic Stress Disorder	30.00
Total	\$324.00

Please list the potential beneficiaries of this proposal (cite courses if applicable, access and
availability of the proposed purchase, etc.): All students, staff and faculty in the Faculty of Engineering who
are interested in self-help and/or personal counselling.
Thank you for your proposal. Please submit the original copy to the Endowment Director.
Submitter Signature: Man Zila tella Date: October 13/44
Date: Ostoper 13/44
Department Approval
Every proposal must be reviewed by the appropriate Department Head. This is done to insure
that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate
Department Head is for your proposal, please contact the Endowment Director, Christopher
Nekkers.
IVERACIS.
The following section is to be completed by the appropriate Department Head.
Name: Dr. G.E. Schneider
Position: Assoc. Dean of Engrg., U/G Studies
Phone Extension: 4792
I DO DO NOT (circle one) approve of the above proposal.
If this proposal has not been approved, please indicate the reasons below:
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
Department Head Signature:

Submitter Information

Name: David Bidgme

Phone Number: 885 Carde

E-mail Address: dante deport chemical

Position (ie. student, professor): date

Proposal Information

Title: E1 - 2527 CKE de y Rom longeter thygradies

Date: Spender / 31

Type (AE&R or non-AE&R): AE E2.

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Estimated Cost of Proposal (please itemize where possible):

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Would partial funding to the cost estimate provided above be acceptable? (Y or N) $\frac{1}{2}$ in merchants

Please list the potential beneficiaries of this proposal (cite courses if applicable, access and availability of the proposed purchase, etc.):
All 4th or shewical students; indicate them
the first from applications developed on the congress drive
Thank you for your proposal. Please submit the original copy to the Endowment Director.
Submitter Signature: Date: 11 / 10/3+
Department Approval
Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers.
The following section is to be completed by the appropriate Department Head.
Name: L'i Rimes (
Position:
Phone Extension:
IDO / DO NOT (circle one) approve of the above proposal.
If this proposal has not been approved, please indicate the reasons below:
Department Head Signature:
Date:



DEPARTMENT OF CIVIL ENGINEERING WEEF FUNDING PROPOSALS FALL 1994

7

WEEF FUNDING PROPOSALS FALL 1994 DEPARTMENT OF CIVIL ENGINEERING SUMMARY (Usage/Cost)

Area	Equipment	Amount	Course(s)	Students P.A.
Building Science Engineering	Portable Multi-Purpose Building Science Test Facility	\$4,800	Civ.E. 407 (Building Science Technology) Civ.E. 300/400 (Project Courses)	30-40
Geotechnical Enginecting	Multimedia Upgrding of Civ.E. 353 (Geotechnical Engineering 2)	\$1,470 Cdn (\$1,050 US)	Civ.E. 353 (Geotechnical Engineering 2)	200
Environmental Engineering	Handheld Dissolved Oxygen Meters	2 (r. \$1,050 = \$2,100	Civ.E. 375, Civ.E. 300/400	240
	Pipettors	2 (a) \$412 = \$824	Env.E. 330 (Lab & Instrumentation Methods), Civ.E. 375 (Water Quality Enginecring), Civ.E. 471 (Waste Water Treatment), Civ.E. 400 (Project 2)	275-300
	YSI 5905 BOD Probe	\$7(%)	Civ.E. 375, Civ.E. 300/400	240
TOTAL:		\$9,894		

(In order of priority)

Civ.E. 472 attracts students from Civil, Chemical and Systems Design Engineering: Env.E. 330 will attract students from Civil, Chemical, Geological and Systems Design. Civ.E. 407 attracts students from Civil, Mechanical, Systems Design Engineering and Architecture. Notes:

The Department of Civil Engineering is willing to contribute partial support depending on the WEEF contribution.



WEEF Proposal Form Fall 1994

Submitter Information

Submitted by: Dr. E.F.P. Burnett Phone Number: 2174

Position: Professor, Civil Engineering Date of Submission: 94.10.06

Proposal Information

Title: Portable Multi-Purpose Test Facility

Description of Proposal: To build a portable test facility to establish one or more of the following: air tightness (air leakage) characteristics, rain/water tightness, and/or structural response of building assemblies or sub-assemblies such as cladding, windows, facades, veneers or screens, or complete wall or roof assemblies. Portability is an important feature to enable us to demonstrate or conduct testing of roofs (uplift, air and rain), walls, doors (industrial) and even dwellings or portions of buildings.

Benefits of the Proposal: At least two faculty members, both involved in Building Technology, will make use of this facility. Professor Burnett will utilize it for Civ.E. 407 (Building Science Technology) and also the related Graduate course (Civ.E. 707). Professor R. Schuster, who has courses in Civil Engineering and Architecture, will use it for demonstration as well as testing purposes (Arch 276, 362 and Civ.E. 703). Enrolment in Civ.E. 407 (Winter Term) is usually between 20 and 30 students drawn from Civil Engineering plus some Mechanical Engineering and Architecture students who choose to do this course in 4B.

Air and moisture are two of the most significant loadings that a building has to accommodate. Prior to 4B, this reality is not acknowledged. There is a need for a demonstration tool and a hands-on test facility. This versatile equipment could also be used by other faculty members and/or students for project courses (Civ.E. 300 and Civ.E. 400).

All components are readily available and we will design and assemble the facility on campus.



Cost Breakdown of Proposal:

Blower Fan and Motor	\$ 350
Analog Meters	\$ 600
Controls	\$ 300
Water Flow and Pressure Gauges	\$ 350
Sparge Rack Distribution System for Water	
including Water Pump, Nozzles, etc.	\$ 650
Air Flow Rate and Pressure Meters	
(Low and High Pressure)	\$ 750
Plumbing, Valves, etc.	\$ 300
Storage Unit	\$ 200
Labour (development, fabricate,	
calibrate, etc.)	\$1300
Total:	\$4800

Implementation Schedule for Project:

Immediately.

Would partial funding to prefer estimate provided above be acceptable?

YES

Submitter Signature:

E.Burnett

Date: October 13, 1994



Department Approval

Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers.

The following section is to be completed by the appropriate Department Head.

Name: Position: Phone:	Chair, Civil Engineering Ext. 2160	
Proposal app	proved: Alexander B.G. Hutchinson	Dated: 94.1= 14.
If this propo	osal has not been approved, pleas	e indicate the reasons below:

Submitter Information

Name: CIV E 353 Department of Civil Engineering - K. Klein and J.C. Santamarina

Phone Number: Ext. 2098

E-mail Address: carlos@civoffice

Position (i.e. student, professor): graduate student (on multimedia teaching) and professor

Proposal Information

Title: Multimedia Upgrading of CIV E 353: Geotechnical Software

Date: October 5, 1994

Type (AE&R or non-AE&R):

Description (use the back of this page or additional paper if more space is required):

Recently, there has been a growing concern regarding the methods used to present course information. This concern is the result of shrinking resources; increasing class sizes (20% in the next ten years); the development of new technologies that students should be introduced to; and the fact that new generations have different learning patterns (i.e. learning patterns are moving away from the chalkboard towards visual media).

The department of Civil Engineering has allocated resources to the exploration of multimedia techniques in teaching (funding to enable students to undertake developmental tasks and release time for professors). Our goal is to make changes to CIV E 353 such that the course includes: animation of simulated physical phenomena, interactive MathCad tutorials, movies of case histories, and a new laboratory on computer software for geotechnical analyses.

We are requesting WEEF support to purchase the software to be used in this laboratory. While the selected software is not sophisticated, it is comprehensive enough to expose undergraduate students to a variety of computer-based designs of geotechnical systems.

Estimated Cost of Proposal (please itemize where possible):

software package	\$650 (US)
licensing for two additional computers	\$400 (US)
total cost	\$1050 (US)

Would partial funding to the cost estimate provided above be acceptable? (Y or \overline{N}) \underline{Y}



Please list the potential beneficiaries of this proposal (cite courses if applicable, access and availability of the proposed purchase, etc.):

The primary beneficiaries of this proposal would be all students taking CIV E 353, as a new laboratory would be based on this software. Students in CIV E 354 and CIV E 454 would benefit as well, since the program incorporates many concepts covered in these courses. Also, this software package could be used by students for their project courses (CIV E 300 and CIV E 400).

courses. Also, this software package could be used by students for their project courses (CIV E 300 and CIV E 400).
Thank you for your proposal. Please submit the original copy to the Endowment Director. Submitter Signature: Date: Oct. 5, 1994
Department Approval
Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers The following section is to be completed by the appropriate Department Head.
Name: B G HUTCHINES
Name: B G HUTCHINES
Phone Extension:
IDO / DO NOT (circle one) approve of the above proposal.
If this proposal has not been approved, please indicate the reasons below:

Department Head Signature:

Date: 94.10.14-

WEEF Proposal Form Fall 1994

Submitter Information

Phone Number: 2908 Submitted by: Bruce Stickney

Date of Submission: 94.10.06 Position: Environmental Engineering

Lab, Civil Engineering

Proposal Information

Title: Two Handheld Dissolved Oxygen Meters

Description of Proposal: YSI 55 Handheld Dissolved Oxygen System. The system consists of a portable meter and probe for field measurement of dissolved oxygen.

Benefits of the Proposal: The meter would be used for a Civ.E. 375 (Water Quality Engineering) Water Quality Laboratory. We currently have three dissolved oxygen meters and these are shared by approximately 120 students each term. The addition of one or two meters would increase accessibility.

Cost Breakdown of Proposal: Two - YSI 55 Handheld Dissolved Oxygen System. Cost: \$1,050 each (Total: \$2,100).

Implementation Schedule for Project: The meters would be used in the Winter and Spring Terms in the Civ.E. 375 Water Quality Labs.

Would partial funding to the cost estimate provided above be acceptable?

YES

Submitter Signature: October 13, 1994



Department Approval

Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers.

The following section is to be completed by the appropriate Department Head.

Name: Position: Phone:	Dr. B.G. Hutchinson Chair, Civil Engineering Ext. 2160	
Proposal ap	pproved: B.G. Hutchinson	Dated: 94 1.5.14
If this prop		please indicate the reasons below:

WEEF Proposal Form Fall 1994

Submitter Information

Submitted by: Bruce Stickney Phone Number: 2908

Position: Environmental Engineering Date of Submission: 94.10.06

Lab, Civil Engineering

Proposal Information

Title: Two Pipettors

Description of Proposal: These variable volume (100-1000 ul.) pipets would be used almost exclusively for sample and reagent preparation in undergraduate laboratories and in graduate research by technical staff. They afford the accurate measurement of small volumes of less than one millilitre and reduces wastage. Currently, we do not have this level of measuring capability.

Benefits of the Proposal: The preparation and dilution of samples in Ion Chromatography and T.O.C. used in Civ.E. 375 (Water Quality Engineering) and Civ.E. 472 (Waste Water Treatment) alone is time-consuming and could be reduced significantly with the acquisition of the pipettors.

Cost Breakdown of Proposal: Two - Eppendorf Model 22 44 020-9. Cost: \$412 each (Total: \$824).

Implementation Schedule for Project: The pipettors would be used immediately.

Would partial funding to the cost estimate provided above be acceptable?

YES

Submitter Signature: Date: October 13, 1994



Department Approval

Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers.

The following section is to be completed by the appropriate Department Head.

Name: Position: Phone:	Dr. B.G. Hutchinson Chair, Civil Engineering Ext. 2160		
Proposal appr	oved: B.G. Hutchinson	Date	ed:4 10 14-
If this propos	al has not been approved,	please indicate the reas	sons bełow:
			•

WEEF Proposal Form Fall 1994

Submitter Information

Submitted by: Bruce Stickney Phone Number: 2908

Position: Environmental Engineering Date of Submission: 94.10.06

Lab, Civil Engineering

Proposal Information

Title: YSI 5905 BOD Probe

Description of Proposal: YSI 5905 BOD Probe - used for measuring dissolved oxygen in a

BOD bottle.

Benefits of the Proposal: This probe would be used in the Civ.E. 375 (Water Quality Engineering) Water Quality Laboratory. We currently have three BOD probes that are shared by approximately 120 students each term. The addition of one probe would allow the use of an additional meter for BOD measurement and would increase accessibility.

Cost Breakdown of Proposal: YSI 5905 BOD Probe. Cost: \$700.

Implementation Schedule for Project: The unit would be used immediately.

Would partial funding to the cost estimate provided above be acceptable?

YES

Submitter Signature;

October 13, 1994

Department Approval

Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers.

The following section is to be completed by the appropriate Department Head.

·		•		
Name: Position: Phone:		6. Hutchinson Civil Engineering 60		
Proposal appr		B.G. Hutchinson	Dated: 24,1= 14	-
If this propos	al has no	t been approved, please	e indicate the reasons below:	

Submitter Information

Name:Roger	Sanderson			
Phone Number:	Ext. 6184			
E-mail Address:	RSANDERS@EEST	AFF		
Position (ie. stud	lent, professor):	Staff		
Proposal Info	rmation			
Title: Upgrade	E&CE Public Acc	ess Watstar Ro	om	
	tober 7, 1994			
	non-AE&R):			
- JF - (*				
Description (use	the back of this paginstall three 4			
	362. The three			
	n this room. The			
				42. Room E2-2362
	access, Watstar			
Estimated Cost of	Proposal (please i	temize where pos	sible):	
B. Each station	would cost \$2200	0.00. One, two	o, or three syst	tems
would be accep	pted for a cost	of \$2200., \$44	400., or \$6600.	
respectively.				
-				<u> </u>

Would partial funding to the cost estimate provided above be acceptable? (Y or N) \underline{Yes}



	al beneficiaries of this proposal (cite courses if applicable, access and posed purchase, etc.):
	posed purchase, etc.): vill bring all of the computers in E2-2362 up to
Windows capabilit	y. The room is used primarily by all the E&CE
students who need	d computer access, but since it is open 24 hours
it is also availa	ble to Engineering students in other Departments.
Thank you for your pr	roposal. Please submit the original copy to the Endowment Director.
Culturistan Cianatura	8 - 0 0
Submitter Signature:	Roger Sanderson
Date.	
Department Appr	oval
Evans proposal must b	ne reviewed by the appropriate Department Head. This is done to incure
7 1 1	be reviewed by the appropriate Department Head. This is done to insure re well informed, and have the opportunity to voice their opinion about
A .	nted to the WEEF Funding Council. If you are unsure who the appropris
7	or your proposal, please contact the Endowment Director, Christopher
Nekkers.	
The following section	is to be completed by the appropriate Department Head.
	4
Name: 5 K	r, EPCE
Position: Cha	V. EPCE
Phone Extension:	4016
	Very strongly
IDO DO NOT (cir	Very strongly cle one) approve of the above proposal.
\bigcirc	X
If this proposal has no	t been approved, please indicate the reasons below:
	1 00
Donostmont II d 0'	as all and I
Department Head Sign	4 4 4 1 4 1 1 2 2
	Date: 57.14,1994

Submitter Information
Name: B. Roehl
Phone Number: Ext. 2607
E-mail Address: BROEHL@eestaff
Position (ie. student, professor): staff
Proposal Information
Title: Expansion of Sunee Facility
Date: October 7, 1994
Type (AE&R or non-AE&R):
Description (use the back of this page or additional paper if more space is required): Purchase two SUN SPARK station5 workstations to expand the sunce lab facility. An increasing number of undergraduate
courses require UNIX based software. This expansion is
necessary to accommodate these students.
Estimated Cost of Proposal (please itemize where possible):
Two SUN SPARK station5 workstations \$13,471.00

Would partial funding to the cost estimate provided above be acceptable? (Y or iN) Yes

Please list the potential beneficiaries of this proposal (cite courses if applicable, access and availability of the proposed purchase, etc.): These workstations would be used in the following electrical and/or computer engineering courses: Fall: ECE 427, ECE 450 Winter: ECE 427, ECE 354 Spring: ECE 455, ECE 450 Availability: All 4th year E&CE students get accounts on the system, as well as all people taking the courses using the system. 24 hour access (combination lock on door). Thank you for your proposal. Please submit the original copy to the Endowment Director. Submitter Signature: Department Approval Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers. The following section is to be completed by the appropriate Department Head. Name: S.K. Chaudhuri Position: Chair, E+CE Dept Phone Extension: 40/6 I DO / DO NOT (circle one) approve of the above proposal. If this proposal has not been approved, please indicate the reasons below:

Department Head Signature: 🤦

Date: Oct. 14, 1994

Submitter information
Name: Paul Hayes
Phone Number: Ext. 3969
E-mail Address: PHayes@eestaff
Position (ie. student, professor):Technical Staff
Proposal Information
Title: Curve Tracer for Electronics Lab.
Date:October 7, 1994
Type (AE&R or non-AE&R):
Description (use the back of this page or additional paper if more space is required) This curve tracer would allow students to obtain characteristic curves of semiconductor devices used in the laboratory. It will also provide hard copies of these. The two 20 year old curve
tracers that are currently in use no longer provide adequate displays and do not have hard copy facilities.
Estimated Cost of Proposal (please itemize where possible):
TEKTRONIX MOD 571 CURVE TRACER \$5,323.00

Would partial funding to the cost estimate provided above be acceptable? (Y or N) $\frac{NO}{N}$

Please list the potential beneficiaries of this proposal (cite courses if applicable, access and availability of the proposed purchase, etc.):
This curve tracer would be used by students in the following
courses: E&CE 231 (2B), E&CE 332 (3B), E&CE 438 and E&CE 439.
All electrical and most computer engineering students take
E&CE 231 and E&CE 332. E&CE 438 and E&CE 439 are optional
courses for fourth year students.
Thank you for your proposal. Please submit the original copy to the Endowment Director. Submitter Signature: Date: Oct 14, 1994
Department Approval
Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers.
The following section is to be completed by the appropriate Department Head.
Name: S.K. Chandhuri Position: Chair, ExcE Phone Extension: 4016
DO NOT (circle one) approve of the above proposal.
If this proposal has not been approved, please indicate the reasons below:
Department Head Signature: Date: Department Head Signature: Date:

Submitter Information
Name: Prof. F. Ismail
Phone Number: 3445
E-mail Address: Position (ie. student, professor): Professor
Position (ie. student, professor):
Proposal Information
1 Toposar Information
Title: Professor
Date: Oct 14/94
Type (AE&R or non-AE&R):
1) po (125 dat 01 110 ti 125 dat).
Description (use the back of this page or additional paper if more space is required):
SAE Professional Development Video set on "Basic Noise Control". The set
is comprised of 3 modules: a) Introduction to Sound, b) Basic Control
is comprised of 3 modules: a) Introduction to Sound, b) Basic Control Concepts, and c) Vibration and Vehicle Noise Control. This set will
enhance the course material of ME 568, "Industrial Noise Analysis and
Control." The set is put together by Mr. Robert F. Hand who has 30
years of experience in the noise field. It uses coordinated graphics
and demonstrations to help comprehend the different concepts of
sound generation, propagation, absorption and transmission.
, rule of the control
Estimated Cost of Proposal (please itemize where possible):
Single-User Video package, \$ 755. US + shipping and handling.

Would partial funding to the cost estimate provided above be acceptable? (Y or N) _N



Please list the potential beneficiaries of this proposal (cite courses if applicable, access and availability of the proposed purchase, etc.): Students in ME 568, "Industrial Noise Analysis and Control". This course is offered every winter with an average enrolment of 40 undergraduates mostly from Mechanical Engineering, and fewer students from civil and system design. It is the only course offered in Engineering on Industrial Noise. With the introduction of "Environmental Engineering" option, it is expected that more students will be interested to learn about how to combat noise pollution in the work place. Thank you for your proposal. Please submit the original copy to the Endowment Director. Submitter Signature: Department Approval Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers. The following section is to be completed by the appropriate Department Head. Name: _____ Position: Phone Extension: I DO / DO NOT (circle one) approve of the above proposal. If this proposal has not been approved, please indicate the reasons below: Department Head Signature: Date:

27

WEEF Proposal Form

Proposal Title, Midnight Sun Solar Car Project
Submitted by: Dr. G. Savage, Dave Walsh,
Position (Student, Professor, Organization, etc.): Project

Phone Number: x2234
Date of Submission: SE. 94

Description of Proposal:

The purpose of the Midnight Sun Project is to enable undergraduates, graduates, staff, and faculty to work on a large scale project. From the criteria and constraints established, the team must then develop designs that could satisfy these limitations. Ultimately, the proposed designs must be critiqued and a final optimal design chosen. SUNRAYCE allows for all these stages to be explored. The final design will then be compared to other universitys' in the SUNRAYCE competition to determin the best overall design and team.

The Midnight Sun Project is an ongoing project dedicated to educating the public on the environment, alternative energy sources, mathematics, science, and engineering. It is through this education and through SUNRAYCE, that the University of Waterloo will ultimately succeed in solar car design.

Benefits of the Proposal (including number and department(s) of students affected):

In order to promote both SUNRAYCE and the Midnight Sun, the project team has performed lectures, talks, and demonstrations to the community and local educational system. As well, Midnight Sun has been in the media, local, national, and international, in both print and electronic form. Promoting education, engineering, and the environment is a strong concern for the Midnight Sun Project.

Within the project team, members can receive academic credit for conducting research, design, and construction of the vehicle. These project courses are Mech 482, Elec 499, SyDe 362, 461, & 462, as well as independent projects through General Engineering. To this date, there have been approximately 35 project courses spanning Engineering and Physics, as well as over 100 students involved at different levels of the project.

The benefit to engineering of a project this size is the fact that it is multi- disciplinary. Engineers from all areas have been involved in the project. In fact, the project should be called a University of Waterloo Project based in Engineering. With this scope, engineering begins to integrate into society.

Cost Breakdown of Proposal (including partial funding options if desired):

The Midnight Sun Project Team is requesting \$5,000 from WEEF. With this cash, the project can purchase the much needed equipment to continue. The following is a detailed breakdown of the possible uses of a \$5,000 donation.

Motor Controller for Project	\$5000
Motor for Project	\$5000
Partial Funding of Solar Array	\$5,000

The Midnight Sun Project would accept partial funding.

Implementation Schedule for Project:

The Midnight Sun Project is an on-going project that will be building a new solar car over the next year and testing in the eight months following construction. The workshops are a continuing aspect to the project enabling students to work in the field of their interest.



11 13 13

WEEF Funding Proposal Form

SUBMITTER INFORMATION

Name:

W.A. (Bill) Anderson

Phone Number:

5011

E-mail Address:

wanderson@chemical

Position (ie. student, professor): Professor, Chemical Engineering

PROPOSAL INFORMATION

Title: Replacement flowmeters for Chemical Engineering Distillation Column

Date: Oct. 13, 1994

Type (AE&R or non-AE&R): AE & R

Description (use the back of this page or additional paper if more space is required):

Based on the recommendations of previous 4th year classes, we would like to replace the five existing rotameter flowmeters with digital models. The existing flowmeters are somewhat oversized for the current conditions, resulting in poor accuracy in the flowmeter readings. Digital flowmeters will provide increased accuracy and improved experimental results and calculations. In addition, the digital flowmeters will allow for future improvements in the form of computer data-logging and automated process control systems.

Estimated Cost of Proposal (please itemize where possible):

Prices are based on items distributed by Miniflow Systems Inc., Watertown MA. Each measurement device consists of a flowmeter and flow converter.

Digital flowmeters: 5 @ \$1167 = \$5835

Flow converters: 5 @ \$501 = \$2505

Total:

\$8340 including GST

Would partial funding to the cost estimate provided above be acceptable? (Y or N): YES



Please list the potential beneficiaries of this proposal (cite courses if applicable, who has access to the equipment, etc.):

All Chemical Engineering undergraduate students are required to participate in labs involving use of the requested items. Specifically, ChE 101 and ChE 040 labs make use of the distillation column experiment, involving about 200 students per year. The requested equipment would be directly used by the students during their lab experiments.

Thank you for your proposal. Please submit the original to the Endowment Director.

Submitter Signature: 24

Date: 8 13 194

Department Head Signature:

Department Approval

Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure about who the appropriate Department Head for your proposal, please contact the Endowment Director, Christopher Nekkers.

The following section is to be completed by the appropriate Department Head:

Name:

Position:

Phone Extension:

2275

I DO / DO NOT (circle one) approve of the above proposal.

If this proposal has not been approved, please indicate the reasons below:



Submitter Information

Name: Stefono Normani / Caroline Brabrook
Phone Number: 725 - 63/0
E-mail Address: Sanor man @ civif
Position (ie. student, professor): Student
Proposal Information
Title: WaterLuge Concrete Tobayan Team "A" Society Date: Oct 27/94
Description (use the back of this page or additional paper if more space is required): The Great Northern Courete Tobeggan Roce (GNCTR) is an annual engineering umgetition open to the cle and technical colleges from anual the works. The event involves the design, unstruction and performance of
engineering umgetition open to shale and technical colleges from around the world. The event involves the design, anstruction and performance of a concrete tobaggen, and is hosted by l'ade for technique in Nontreal this isoming January. Entries are judged in accrete design, brooking design, structural chasses, presentation and team sport
Estimated Cost of Proposal (please itemize where possible): Water Luge is requesting spinsorship from WEEF for approximately holf of the proposed budget deficit for a total of \$1950
A current budget and a proposed budget are attached for much information.

Would partial funding to the cost estimate provided above be acceptable? (${f Y}$ or ${f N}$) $\underline{{f Y}}$

Please list the potential beneficiaries of this proposal (cite courses if applicable, access and
availability of the proposed purchase, etc.):
Direct beneficiones would be the 23 members of Water Luge, but the University of Waterlaw would also benefit due to national and legal
news exposure (the competition in 1994 was avered by CBC Newsworld)
goined by participating in this international competition.
Thank you for your proposal. Please submit the original copy to the Endowment Director. Submitter Signature:
Date: $\frac{\sqrt{27/94}}{\sqrt{94}}$
Department Approval
Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers.
The following section is to be completed by the appropriate Department Head.
Name:
Position:
Phone Extension:
DO NOT (circle one) approve of the above proposal.
If this proposal has not been approved, please indicate the reasons below:
Department Head Signature:
Department Head Signature: Date:

CURRENT BUDGET

Sponsors:

University of Waterloo:

Dean of Engineering	\$600.00
Sandford Fleming Foundation	\$500.00
Federation of Students	\$1,380.00
Engineering Society 'A'	\$200.00

Corporate:

Italia Pizza	\$200.00
John Emery Geotechnical Engineering	\$200.00

Fundraising:

B.B.Q.'s - net profit	\$900.00
Total	\$3,980.00

BUDGET

	Expense	Revenue	Net
Sponsors:			
University of Waterloo:			1
Dean of Engineering		\$600.00	\$600.00
Sandford Fleming Foundation		\$500.00	\$1,100.00
Federation of Students		\$1,380.00	\$2,480.00
Engineering Society 'A'		\$200 00	\$2,680.00
Corporate:			\$2,680.00
Italia Pizza		\$200.00	\$2,880.00
John Emery Geotechnical Engineering Ltd.		\$200.00	\$3,080.00
other expected		\$600.00	\$3,680.00
Fundraising:			\$3,680.00
B.B.Q.'s - 12 x \$150.00		\$1,800.00	\$5,480.00
other fundraising events		\$500.00	\$5,980.00
Expenses:			\$5,980.00
entry fee (23 x \$60)	\$1,380.00		\$4,600.00
toboggan construction	\$1,000.00		\$3,600.00
uniforms	\$600.00		\$3,000.00
transportation	\$4,000.00		(\$1,000.00)
accommodation	\$2,275.00		(\$3,275.00)
promotion	\$500.00		(\$3,775.00)
Totals:	\$9,755.00	\$5,980.00	(\$3,775.00)

Submitter Information

Name: M. Kaptein	Language and the same of the s
Phone Number: 3026	
E-mail Address: rkap & surya	
Position (ie. student, professor):	Mech. Eng. Lab Director
•	
Proposal Information	
Title: WATSTAR Rm upgrade	
Date: Oct. 12/94	
Type (AE&R or non-AE&R):	
The WATSTAR Rm 1304, E2 has the last year. It would be v an IBM Leopard motherboard t	age or additional paper if more space is required): presented some maintenance problems during very useful to upgrade the stations with to avoid these problems in the future and uputing power by a factor of 3.
Estimated Cost of Proposal (please Leopard IBM 486-66Mh2 board 4 MB memory	itemize where possible): \$ 258.00 212.00 470.00
10 stations Total	\$ 4,700.00
_	
_	

Would partial funding to the cost estimate provided above be acceptable? (Y or N)

Thank you for your proposal. Please submit the original copy to the Endowment Director. Submitter Signature: Date: Oct 12/94 Department Approval Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers. The following section is to be completed by the appropriate Department Head. Name: Position: Phone Extension: I DO DO NOT (circle one) approve of the above proposal. If this proposal has not been approved, please indicate the reasons below:
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Name: Position: Phone Extension: I DO: DO NOT (circle one) approve of the above proposal.
Phone Extension: I DO: DO NOT (circle one) approve of the above proposal.
Phone Extension: I DO / DO iNOT (circle one) approve of the above proposal.
I DO DO NOT (circle one) approve of the above proposal.
If this proposal has not been approved, please indicate the reasons below:
Department Head Signature: Kon Alch



Submitte	r Informati	<u>on</u>						
Name:	M. Kaptein							
the state of the s	aber: 3026							
E-mail Add	iress: rkap	& surya						
Position (i	e. student, pro	fessor): Dir	ector	of Lal	os Mech	. Eng.	_	
Proposal	Informatio	n						
Title: La	iboratory St	ations						
The late of the la	Oct, 1994							
	&R or non-AE	&R).	_					
-) Po (. —								
Both ME		548 use com	puters	as pa	art of	their un	e is required): ndergraduate	
programm terms of	ing and deb	ugging of N ficiency to	C code	. It s	ould b	e very u		
							en not neede	
	ific course		DIE CO	all	ie stud	euts wite	an not neede	u
TOL SPEC	Tite course	31.						
Estimated (Cost of Propos	al (please ite	mize wi	nere po	ssible):			
eight	486-66 c	omputers		\$702	2.00 ea	ch		
	Total		\$	5,616	.00			
NOTE: M	E Department		ased 1	0 new	monito	rs for t	this	
935 = ==								

Would partial funding to the cost estimate provided above be acceptable? (Y or N)

Please list the potential beneficiaries of this proposal (cite courses if applicable, access and
availability of the proposed purchase, etc.):
ME 262 approx. 75 students ME 548 approx. 30 students
Other times all ME students.
Thank you for your proposal. Please submit the original copy to the Endowment Director. Submitter Signature: Date: Oct 12/94
Department Approval
Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers.
The following section is to be completed by the appropriate Department Head.
Name:
Position:
Phone Extension:
I DO DO NOT (circle one) approve of the above proposal.
If this proposal has not been approved, please indicate the reasons below:
\mathcal{O} \mathcal{O} \mathcal{O}
Department Head Signature:

Submitter Information

Name: _M. Kaptein
Phone Number:3026
E-mail Address: rkcap & surya
Position (ie. student, professor): Director of Labs Mech. Eng.
Proposal Information
Title: Robotics computer controllers
Date:Oct 12/94
Type (AE&R or non-AE&R):
-)Fo (
Description (use the back of this page or additional paper if more space is required):
Robotics was first introduced to the undergraduates in 1986 with the
development of ME 447. The department purchased two small robots,
a CCD camera, a frame grabber and an IBM AT. Over the years, this
equipment has been used extensively, however, with the recent development
of ME 547, we need to replace old and improve on some of the existing
equipment WEEF funded this proposal in part last term. (A CCD camera,
frame grabber and some software).
Estimated Cost of Proposal (please itemize where possible):
2) 486-50 SLC computer \$1,265.
Total \$2,530.
Would partial funding to the cost estimate provided above be acceptable? (Y or N)



THE PERSON OF TH

Please list the potential beneficiaries of this proposal (cite courses if applicable, access and availability of the proposed purchase, etc.):
ME 447 and ME 547 about 50 students
Thank you for your proposal. Please submit the original copy to the Endowment Director. Submitter Signature: Date:
15
Department Approval
Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers.
The following section is to be completed by the appropriate Department Head.
Name:
Position:
Phone Extension:
I DO DO NOT (circle one) approve of the above proposal.
If this proposal has not been approved, please indicate the reasons below:
Department Head Signature: Date: Department Head Signature:

(40)

WEEF FUNDING PROPOSAL FORM

Submitter Information
Name: M. Kaptein
Phone Number: 3026
E-mail Address: rkap, surya
Position (ie. student, professor): Lab Director Mech. Eng.
rosidon (le. student, professor). Lab Director Rech. Eng.
Proposal Information
Title: CAM CORDER
Date: Oct 12/94
Type (AE&R or non-AE&R):
The Department has many student projects which are part of a core course or a specific project course like ME 482. Often students need to videotape an event for data acquisition or simply for presentation Our current video corder has been damaged during such an event and needs to be replaced.
Estimated Cost of Proposal (please itemize where possible): Panasonic Camcorder wih 12X zoom and high speed shutter.
\$ 1,098.00

Would partial funding to the cost estimate provided above be acceptable? (Y or N) ____

. :

THE THE STATE OF THE STATE

Please list the potential beneficiaries of this proposal (cite courses if applicable, access and
availability of the proposed purchase, etc.): Students of all year courses like ME 482 and other design oriented courses.
Thank you for your proposal. Please submit the original copy to the Endowment Director. Submitter Signature: Date: Oct 12/94
Department Approval
Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers.
The following section is to be completed by the appropriate Department Head.
Name:
Position:Phone Extension:
Thore Extension.
I DO / DO NOT (circle one) approve of the above proposal.
If this proposal has not been approved, please indicate the reasons below:
Department Head Signature: Date: Det 14/94



Submitter Information

Name: ___

John J. McPhee

Name.				
Phone Number:	ext. 5341			
E-mail Address:	mcphee@dial			
Position (ie. studen	t, professor):	Assistant Pr	rofessor	_
Proposal Inform	nation			
Title: DADS Engir	neering Softwar	re		
Date: 6 October	1994			
Type (AE&R or no	n-AE&R):			
DADS is a com	puter-aided er olves the equat	ngineering pr		matically al systems
such as mechanis	ms, vehicles,	and robotic	manipulators, g	iven only
a description of calculated resulunderlying physi	ts provide ins		mputer animations ne system motion	
(See attachme	ents for furthe	er informatio	(אמני	
Estimated Cost of Pr U.S.\$2000 (ap	roposal(please it oproximately CD		ossible):	
			of the student	
			one-time cost ind	
both documentati	on and mainter	nance.		

Would partial funding to the cost estimate provided above be acceptable? (Y or N) $\underline{\mathbb{N}}$

Please list the potential beneficiaries of this proposal (cite courses if applicable, access and availability of the proposed purchase, etc.):
Because of its general nature, the DADS software would be of use
to any students taking courses in mechanical design or dynamics. In
particular though, undergraduate students in SD 382 (Modelling and Simulation of Mechanical Systems), SD 553 and ME 524 (Advanced Dynamics), and ME 321 (Kinematics and Dynamics of Machines) would
benefit greatly from access to this computer-aided design tool.
Thank you for your proposal. Please submit the original copy to the Endowment Director.
Submitter Signature: Date: 6 October 1994.
Department Approval
Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekkers.
The following section is to be completed by the appropriate Department Head.
Name:
Position:
Phone Extension:
I DO / DO NOT (circle one) approve of the above proposal.
If this proposal has not been approved, please indicate the reasons below:
Department Head Signature
Department Head Signature:

Submitter Information

Name: Clark Anvick
Phone Number: 884 - 7896

	E-mail Address: <u>CNAnvick@ Mechanical</u> Position (ie. student, professor): <u>Student</u>
	Proposal Information
7)	Title: Computer Skills Upgrading Course Date: first two weekends of 10 Security System for Watstar ASAP - in order to prevent costly
	Thet's. (i.e sustem 1.7)
	Description (use the page of additional paper is more space is required). We of Guelo
	- these notes will be developed by an instructor from a Community College - these notes will developed in a command definition format.
	- the notes will be sent out Dutes before 2B
	lecture. an instructor will be present such that
	Estimated Cost of Proposal (please itemize where possible):
	(2) - for estimated Cost, contact U of Guelph. (D - Cost Outline:
	- Student / instructive writing the ? - Printing Po (200 pages) ? - distribution Pop (2005/6/2 pages/6/2 studente) ?
	- distribution for (possible pagable by students) ? - Instructor time (37/hrs.)

Would partial funding to the cost estimate provided above be acceptable? (Y or N)

Please list the potential beneficiaries of this proposal (cite courses if applicable, access and
availability of the proposed purchase, etc.):
1) - This would be an experiment on the SA Mech Class
- after workshops are completed a survey of stadents
stout be taken
- a fur of refinement should be allowed
- them the another and supporting protes will
he presented to the IA classes (Mach Civ)
- this will prove to be quete helpful to all
2) - UEEF (spend less on replacement costs) Thank you for your proposal. Please submit the original copy to the Endowment Director.
2) - WEEF (spend less on replacement costs)
Thank you for your proposal. Please submit the original copy to the Endowment Director.
Submitter Signature: (1) The submitter Signature:
Date: 0-7. 28/94
Department Approval
Every proposal must be reviewed by the appropriate Department Head. This is done to insure
that the departments are well informed, and have the opportunity to voice their opinion about
proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate
Department Head is for your proposal, please contact the Endowment Director, Christopher
Nekkers.
The following section is to be completed by the appropriate Department Head.
211 1020 x 208 000 100 10 10 10 10 10 10 10 10 10 10 1
Name:
Position:
Phone Extension:
I DO / DO NOT (circle one) approve of the above proposal.
If this proposal has not been approved, please indicate the reasons below:
The second secon
Department Head Signature:

WEEF Proposals

Extended Description:

1) The 2A Mechanical class has expressed their desire to upgrade themselves in computer skills. A large percentage of the class felt that they did not have the type of computing skills that the "good" jobs were asking for. A small number of students in the class have had the opportunity to learn on the job site various software packages (AutoCad, "C", simulations, etc.). The remaining students are currently finding that they are not getting the interviews due to lack of computer skill. This proposal addresses this problem.

The students largest concern is AutoCad and Unix. A survey was taken, and 78% of the students felt that they did not know AutoCad well enough to be able to use it at a work site. We would like to be taught this software package in a short 4-5 day "clinic" at the beginning of 2B. A rough outline of the course follows:

Over this next Co-op term, (Jan. - May) we would like to see a packet put together that would provide an "idiots guide to This could possibly be written by a student or an AutoCad". instructor from a technical college. The notes would be sent out 2-3 weeks before the beginning of 2B. This would provide students time to read through the notes. Once they arrive on campus, the first 2 weekends will be dedicated to hands on experience. Possibly up to eight hours a day. During this time small assignments will be done, and a small staff of experienced people will be available to answer questions. Hopefully this will provide a base for students to build from. Although in the past, students didn't have to worry about this "draftperson" skill, it was up to the employer to teach these skills. We feel the pressure to be better equipped. After this "experimental" course is completed, a survey should be taken to find out how effective the course was. Modifications will need to be made, but hopefully in the future this "course" can be used. If the course works well, I feel WEEF should consider implementing this at the 1A/1B level for all Mechanical and Civil Engineering students. Furthermore, if this does prove to be effective, other software packages could be introduced/taught in this manner. At the beginning of every term a software package could be taught. This would equip students very early in their Co-op careers.

Outline of Notes:

- I) General introduction
- II) How to start
 - 1) set-up of page/parameters
 - 2) introduction to all preliminary and basic commands
- II) Commands for Drawing
 - 1) Line and curved line drawing
 - 2) Drawing lines in 3-d

- 3) Editing commands
 i) shortcut methods
 ii) exploding and point picking etc.
- III) Rendering
 - 1) visual tools and presentation methods
 - 2) labelling , adding measurements
- IV) Plotting
- V) Intro to UNIX
 - 1) comparison between DOS and Unix
 (i.e. Dos command = _____ Unix Command)
- 2) Over the past year I've heard about thefts from the computing facilities on campus. Unfortunately I don't have an exact figure of the worth of the stolen property. However, I feel that the computers are a little too accessible and there is no security system. I realize that a security system could cause problems or be very expensive, but a student in the 2A mech. class informed me that U of Guelph has an easy and effective security system. Please look into this, I feel it might be a worthwhile expense.

MEMORANDUM.

To: Members of the Board of Directors the "Waterloo Engineering Endowment Fund".

From: Guenther Metzker, Lab Director. Department of Systems Design.

Cc: Prof. K. W. Hipel, Chair, Dept of Systems Design.

Subject: Project proposal for consideration by WEEF, Fall 94 academic term.

Please find attached several proposals from the Department of Systems Design for your kind consideration.

These proposals are intended to improve the quality of teaching and specifically the "Undergraduate teaching laboratory" in Systems Design. The laboratory equipment preference within the proposals was arrived at in discussions with student representatives, faculty members, the Chair, Associate Chair, and myself.

Sincerery

G.Metzker.

(95)

WEEF FUNDING PROPOSAL FORM

Submitter Information

Name: Guenther Metzker Phone Number: Ext 5760 E-mail Address: gmetzker@zeus

Position (ie. student, professor): Lab.Director, Dept.of Systems Design

Proposal Information

Title: Laboratory upgrade; Oscilloscopes

Date: Oct. 10, 1994 Fall 94. Academic Term

Description (use the back of this page or additional paper if more space is required):

Dual channel digital storage Oscilloscopes, Tektronix model No. TDS 310.

The currently used Oscilloscopes had been purchased in 1974 and are becoming ever more unreliable. Our proposal is to replace all of our Oscilloscopes in the teaching laboratory with new digital technology Oscilloscopes in a planned manner by the fall of 1995.

We have already purchased one Oscilloscope with a previous WEEF grant (Summer) and one from Alumni funds.

Estimated Cost of Proposal (please itemize where possible):

The cost of the Oscilloscope model No. TDS 310 is \$ 3585.00

Would partial funding to the cost estimate provided above be acceptable? (Y or N): YES.

Please List the potential beneficiaries of this proposal (cite courses if applicable, access and availability of the proposed purchase, etc.):

The equipment purchased with these funds will be used in the systems design undergraduate laboratory for all SYDE Laboratory courses. (SYDE192, SYDE292, SYDE352, SYDE283.) The Laboratory is also available to all systems students for all there course requirements. To date we have purchase two Oscilloscopes and plan to purchasing the additional units (a total of eight are required) with next years Teaching Equipment Fund. We indicated in the previous WEEF grant proposal that we will ask for one additional Oscilloscopes in the next spending cycle.

Submitter Signature:

Date: Oct. 10, 1994.



Department Approval

Every proposal must be reviewed by the appropriate Department Head. This is done to insure that the departments are well informed, and have the opportunity to voice their opinion about proposals being presented to the WEEF Funding Council. If you are unsure who the appropriate Department Head is for your proposal, please contact the Endowment Director, Christopher Nekhers.

The following section is to be completed by the appropriate Department Head.

Name: Prof. K W. Hipel

Phone Extension: 4644

(1 DO) DO NOT (circle one) approve of the above proposal.

If this proposal has not been approved, please indicate the reasons below:

Department Head Signature:

Date: __October 11, 1994