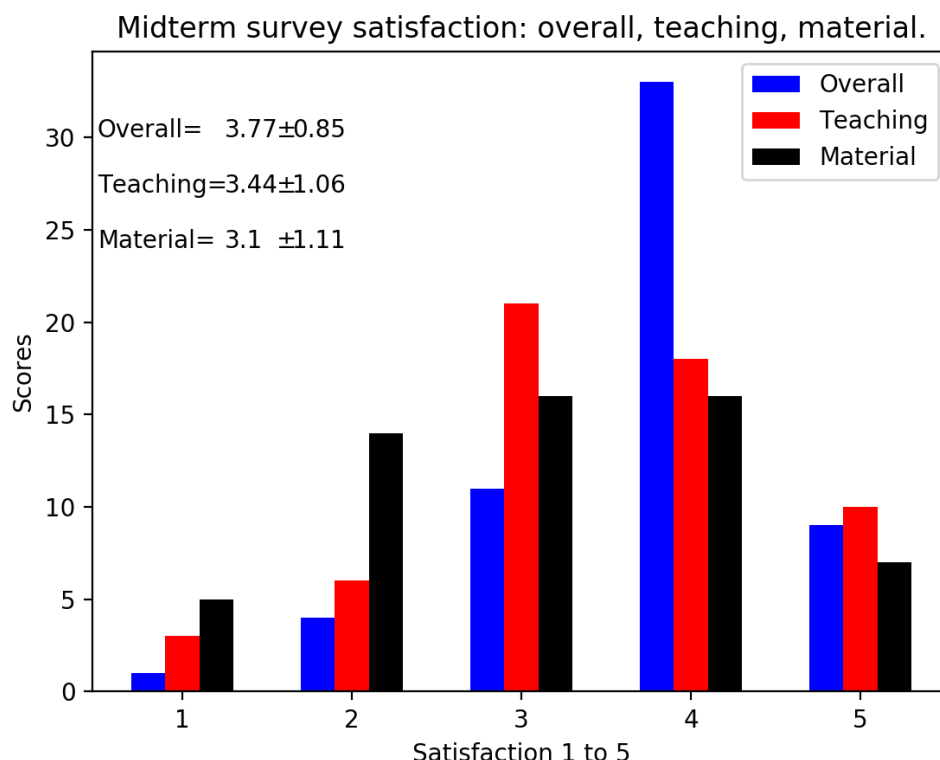


## MATH2640 Mid-term Survey



**Figure 1.** Bar-diagram of midterm survey results on overall satisfaction, teaching and support materials. Scores 1 to 5 with 5 Definitely agree, 4 mostly agree, 3 neither agree nor disagree, 2 mostly disagree, and 1 definitely disagree. 58 respondents. Double-checked. Check the sigma (code attached)!

### Comments, common and selection, and response

1) *Double files on Minerva*

Response: I noticed this and I had fixed the issue a few weeks before the survey. Moreover, the shadow GitHub site for Math2640 created as back-up for Minerva downtime consists of one directory with all relevant files, i.e. assessment/tutorial question, summary notes, and solutions, and is always updated alongside Minerva. May be more convenient.

2) *Lecture capture being inadequate with respect to capturing the board, in part due to using a blue pen. Some people require me to use a blue pen in order to be able to read the board.*

Response: please be at the lectures.

3) *On my handwriting not being legible or the blue pen fading.*

Response: it is your responsibility if I do not notice to immediately tell me in class when something is not legible please, which I also had requested in the first lecture. I will do my best.

4) *Hand out (summary) lecture notes and example sheet.*

Response: in the first lecture I asked who wanted printed summary lecture notes, should ask/email me and I eluded to Climate Change requiring less print-outs. In case of notes set 5; these are basically full notes, I noticed when comparing with the hand-written notes I use!

5) *Lack of full lectures notes.*

Response: after consultation with lecturers over last 10-15 years, to ensure attendance only summary lecture notes are made available, always well before the lectures. However, the (summary) lecture notes have been expanded. So, in case of notes set 5; these are basically full notes, I noticed when comparing with the hand-written notes I use!

6) *On (relevant) slides and summary notes not being available before the lectures.*

Response: not true, they are always available before the lectures and (sometimes) updated afterwards.

7) *A general dissatisfaction with the use of slides instead of the whiteboard.*

Response: discontinued (it was meant to accommodate some more comprehensive notes but it became a failed experiment). Slides were never meant to be copied, since they are always available.

8) *Wipe out board completely clean. Pens too light. Handwriting poor.*

Response: warn me directly if the board is too smudged or if the pens are too light, handwriting poor, and that is our joint responsibility; note that in early lectures the board was not cleaned properly or at all by services and it took multiple complaints to sort this out.

9) *There being very little support available.*

Response: the following support is available: a) lectures with opportunity to ask questions before and afterwards; b) tutorials with opportunity to ask questions; c) summary lectures notes and tutorial solutions; d) opportunity to ask tutorial leaders in person; e) opportunity to ask tutorial leaders by email (after which they may prefer to see you in person) and I have assist people late in the evening on Wednesday and Sunday, for example, which is beyond the call of duty.

10) *More exam-based examples.*

Response: the exam is a relevant representation of the course, its theory and its numerous examples (there are circa 8x5 example questions, plus lecture and summary notes examples, and examples in two old exams).

11) *Mark all homework questions.*

Response: a selection is chosen at random in order to provide in depth feedback; also and more importantly, full solutions are made available for self-checks.

12) *Typos being irritating.*

Response; I agree and I apologise but it is nonetheless important to simply fix these in honesty once caught. The summary lecture notes contained various typos that I fixed.

13) *Love it. Keep up the good work.*

Response: ta.

```
#####
#####
#
# Plots for Exercise No.1 MATH2460; 26-09-2019 by Onno Bokhove
#
# Used to plot graphs in exercise;
# none of this programming material is mandatory, of course.
#
#####
#####
# GENERIC MODULES REQUIRED
#
import math
import numpy as np
import os
import errno
from mpl_toolkits import mplot3d
import matplotlib.pyplot as plt
import time
import matplotlib.mlab as mlab
import matplotlib.gridspec as gridspec
from math import pi, e
def truncate(number, digits):
    stepper = 10.0 ** digits
    return math.trunc(stepper * number) / stepper
#
#
# Parameter
#
#
u1 = 100.0**1.05
u2 = (480)**0.25*(200)**0.8
print(" 100^1.05 (200)^0.8 (480)^0.25",u1,u2,0.8*u2,0.8*u2/240-1)
#
# Mid-term survey
#
#
#
N1 = 10+31+11+3+1
N2 = 10+16+20+5+3
N3 = 7+14+14+14+6
counts1 = [1,4,11,33,9]
counts2 = [3,6,21,18,10]
counts3 = [5,14,16,16,7]
N1 = np.sum(counts1)
N2 = np.sum(counts2)
N3 = np.sum(counts3)
Overa = (9*5.0+33*4+11*3+4*2+1*1)/N1
Teach = (10*5.0+18*4+21*3+6*2+3*1)/N2
```

```

Mater = (7*5.0+16*4+16*3+14*2+5*1)/N3
print(" Scores overall; teaching; material",Overa,Teach,Mater,N1,N2,N3)
plt.figure(1)
#
#
counts1 = [1,3,11,31,10]
counts2 = [3,5,20,16,10]
counts3 = [6,14,14,14,7]

counts1 = [1,4,11,33,9]
counts2 = [3,6,21,18,10]
counts3 = [5,14,16,16,7]
N1 = np.sum(counts1)
N2 = np.sum(counts2)
N3 = np.sum(counts3)
Overa = 0.0
Teach = 0.0
Mater = 0.0
for jj in range(0,5):
    Overa = Overa + counts1[jj]*(jj+1.0)
    Teach = Teach + counts2[jj]*(jj+1.0)
    Mater = Mater + counts3[jj]*(jj+1.0)
Overa = Overa/N1
Teach = Teach/N2
Mater = Mater/N3
Sigma = 0.0
Sigmt = 0.0
Sigmm = 0.0
for jj in range(0,5):
    Sigma = Sigma + counts1[jj]*((jj+1.0)-Overa)**2
    Sigmt = Sigmt + counts2[jj]*((jj+1.0)-Teach)**2
    Sigmm = Sigmm + counts3[jj]*((jj+1.0)-Overa)**2
Sigma = np.sqrt(Sigma/(N1-1.0))
Sigmt = np.sqrt(Sigmt/(N1-1.0))
Sigmm = np.sqrt(Sigmm/(N1-1.0))
print(" Scores overall; teaching;
material",Overa,Sigma,Teach,Sigmt,Mater,Sigmm)
bins = [1.0, 2.0, 3.0, 4.0, 5.0]
barwidth = 0.2
bins1 = [1.0, 2.0, 3.0, 4.0, 5.0]-barwidth*np.ones(5)
bins2 = [1.0, 2.0, 3.0, 4.0, 5.0]+barwidth*np.ones(5)
print(" hist ",bins,bins1,counts1)
plt.bar(bins1, counts1,barwidth,color='b',label='Overall',align='center')
plt.bar(bins, counts2,barwidth,color='r',label='Teaching',align='center')
plt.bar(bins2, counts3,barwidth,color='k',label='Material',align='center')
plt.text(0.5,30,'Overall=')
plt.text(1.25,30,truncate(Overa,2))
plt.text(1.55,30,'$\pm$')
plt.text(1.65,30,truncate(Sigma,2))

```

```
plt.text(0.5,27,'Teaching=')
plt.text(1.25,27,truncate(Teach,2))
plt.text(1.55,27,'$\pm$')
plt.text(1.65,27,truncate(Sigmt,2))
plt.text(0.5,24,'Material=')
plt.text(1.25,24,truncate(Mater,2))
plt.text(1.55,24,'$\pm$')
plt.text(1.65,24,truncate(Sigmm,2))
# plt.text(1.5,30,'$\pm$',Sigma)
#
plt.ylabel('Scores')
plt.xlabel('Satisfaction 1 to 5')
plt.title('Midterm survey satisfaction: overall, teaching, material.')
plt.legend()

print("Finished program!")
plt.show(block=True)
plt.pause(0.001)
plt.gcf().clear()
plt.show(block=False)
```